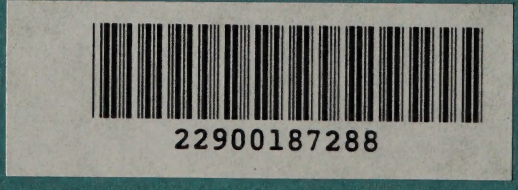
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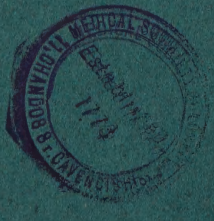

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The London Medical Record.

LOSSEN ON NEPHRECTOMY.

PROFESSOR HERMANN LOSSEN, of Heidelberg, reports (*Deutsche Zeitschrift für Chirurgie*, Band xiii, Heft 3, 4) an important case of successful removal of a sarcomatous kidney, from a woman in the third month of pregnancy. The patient, who was 37 years of age, and the mother of eight children, applied for the treatment of a rapidly enlarging, though painless, swelling of twelve months' growth, in the right side of the abdomen. On examination, this was found to be a round tumour, of the size of a child's head, of firm consistence, and freely movable, as far as the median line. A second tumour, that could be felt just above the symphysis pubis, was formed by the enlarged uterus. There had not been any menstrual discharge during the previous ten weeks. The urine was normal as to quantity, and quite clear. The case was diagnosed as one of tumour of the right ovary, and Professor Lossen proposed to operate when the patient had passed into the fourth month of pregnancy. In consequence, however, of rapid increase in the size of the growth, it was found necessary to attempt its removal after an interval of three weeks from the first inspection. The tumour, after incision of the linea alba from the umbilicus, was found lying behind the posterior parietal layer of the peritoneum; its surface was of a bluish-white colour, and traversed by enlarged veins. After careful dissection, a portion of the small intestine being drawn outwards through the external wound, and protected by carbolic-acid compresses, it was made out that the growth was implanted by a broad base on the convex margin of the right kidney, which viscus had a very long pedicle. Immediately after excision of the tumour, together with the kidney, there was profuse hæmorrhage from the pedicle, in consequence of slipping of a provisional ligature. The bleeding having been arrested for a time, through compression of the abdominal aorta, the pedicle was taken up, and secured by a Spencer Wells's clamp. The operation was performed, and the abdominal wound subsequently dressed, with attention to all the details of the antiseptic method. The patient ultimately made a good recovery, and was able to return to her home in the sixth week after the date of operation. The progress towards recovery, however, was interrupted by abortion, commencing three hours after the operation, and by subsequent septic endrometritis, which was promptly and heroically treated by intra-uterine injections of a 5 per cent. solution of carbolic acid. The clamp was removed on the fourteenth day. The quantity of urine, which was much reduced soon after the operation, rapidly increased, and attained its normal amount. On the second day after that of the operation, 670 cubic centimètres were passed during twenty-four hours; on the eighth day 1,000 cubic centimètres, and on the eleventh day 1,500 cubic centimètres. This, like the first case of nephrectomy, performed by Gustav Simon, shows how rapidly a healthy kidney may take on the functions of the fellow organ.

The tumour, which presented the microscopical characters of angiosarcoma, was enclosed in a tough fibrous capsule, continuous with the capsule of the kidney. This organ seemed to be quite healthy; and, on transverse section through the kidney and tumour, a marked difference was presented between the firm, dark red, and striated structure of the former, and the soft, medullary, and pale structure of the morbid growth. There was a distinct boundary line at the surface of the kidney, and it was evident that the tumour had originated, either in the renal capsule, or in the superficial portion of the renal cortical substance. From the abnormal length of the renal pedicle, and the extreme mobility of the diseased organ, the author is disposed to regard this as a case of malignant disease attacking a floating kidney.

Professor Lossen states that this is the second case of successful extirpation of a solid renal tumour. The first case, which resembled this in many respects, and was also one of angiosarcoma, has been reported by Dr. A. Martin, in the *Berliner Klinische Wochenschrift*, No. 22, 1879. There can now be no doubt, it is asserted, that the condition of pregnancy need not prevent the surgeon from operating for the removal of an abdominal tumour. Of fourteen cases, collected by Olshausen, of ovariotomy performed on pregnant women, death occurred in two only, and in four only of the survivors was the pregnancy interrupted. In the present case, it was intended to postpone the operation until the fourth month, in order to avoid abortion, but it was found necessary to attempt the removal of the rapidly growing tumour before the expiration of the third month. Even under these conditions, there seemed to be a fair chance of preservation of the fœtus. The woman, who had given birth to eight children, was strong and healthy, and the uterus was not exposed during the operation. The abortion, which commenced about four hours after the operation, was very probably due to shock and loss of blood, and to temporary compression of the abdominal aorta, exciting contractions of the uterus.

W. JOHNSON SMITH.

VAN HARLINGEN ON MEDICINAL ERUPTIONS.

DR. ARTHUR VAN HARLINGEN, chief of the skin clinic in the hospital of the University of Pennsylvania, read before the American Dermatological Association a paper on medicinal eruptions, which is published in the October number of the *Archives of Dermatology*. This paper contains many facts and reports of cases which have not been heretofore collected and formulated for the benefit of the general profession. Of late years a number of scattered cases of medicinal eruption, following the employment of quinine particularly, have been published in the medical journals; but perhaps it is not generally known to what an extent eruptions from other drugs than quinine are apt to occur. The following synopsis of Dr. Van Harlingen's paper is taken from the *Michigan Medical News* of November 25, 1880.

Arsenic.—A dermatitis of an erysipelatous nature is reported to sometimes follow the use of this drug; papular eruptions also, resembling the lesions of measles or those of the familiar papular syphiloderm of the face, though of a less coppery colour. Urticaria-like eruptions seem, however, to be of most frequent occurrence, accompanied in some instances by pyrexia.

Belladonna.—It is well known that this drug is

recommended by the believers in the universality of the law of *similia similibus curantur* as a prophylactic of scarlatina, this belief being based on the fact that an erythematous or scarlatiniform rash sometimes follows its use. A number of cases are reported in which such an eruption occurred, it being usually unaccompanied by burning or itching, and never followed by desquamation. The mucous membranes are apt to be affected at the same time.

Bromine.—Some, at least, of the eruptions due to the ingestion of bromide of potassium and other bromides, have been known and recognised almost ever since the introduction of these drugs. The acneiform and pustular varieties, occurring usually on the face and chest, are probably the most familiar. An erythematous eruption sometimes also occurs, and cases of maculo-papular, furunculoid, and bullous eruptions are reported.

Chloral.—The erythematous eruption is that most commonly observed as a result of the ingestion of chloral. It is often described as scarlatiniform or of a dusky rose-colour, is apt to occur in patches with swelling and heat of the affected parts, and is commonly accompanied by severe itching. It may last from half an hour to several hours. Like that due to belladonna, this eruption appears to be due to vaso-motor paralysis, as are also the palpitations and dyspnœa which are not unusual concomitant symptoms. Cases of urticarious, papular, vesicular, and pustular eruption are also reported, while occasionally more severe forms of skin-disturbance, as purpura, follow upon the prolonged use of chloral.

Copaiba.—The usual eruption from copaiba is a perfectly characteristic papular erythema or roseola. It appears by preference upon the hands, arms, knees, feet, and abdomen. Sometimes it appears suddenly, and covers the entire surface. If the copaiba be continued it may take on other forms, and a true erythema may be produced. The disagreeable odour of the skin in the copaiba eruption, owing to the large quantity of the drug eliminated by the various glands, is a diagnostic point of value.

Cubebs only rarely cause skin-troubles, and then after the use of considerable doses, especially in young subjects. The skin, bright red in colour, in a case reported, showed a considerable number of millet-seed sized elevations, which united here and there into finger-nail-sized patches. There is no fever, pruritus, or throat-trouble.

Iodine.—Eruptions due to iodine have long been recognised. The form may be erythematous, papular, vesicular, bullous, pustular, or hæmorrhagic. Iodid of potassium is the form in which the iodine is usually administered, but in any form it may produce eruptions. A form has recently been described which is said to closely resemble eczema. It is very rare. It mostly affects the hairy scalp and the neighbourhood of the scrotum, and soon disappears on stopping the iodide; phlegmonous and purpuric eruptions have also been known to occur. The *rationale* of the iodine eruptions seems to be that there are conditions in which iodine, when present in the blood, attacks and disorganises the vessels at certain localised points.

Mercury.—Eruptions from the use of mercury are rare, and Hebra even went so far as to declare that 'no morbid outbreak upon the skin could be brought about by the internal administration of any mercurial preparation whatever'. Several cases are, however, collected by Dr. Van Harlingen, in which the eruption was clearly traceable to mercury as the cause. These cases show the outbreak to have been almost invariably of an erythematous or scarlatiniform character, although cases have been reported where vesicles, bullæ, pustules and phlegmon have been observed.

Morphia, Opium.—The eruption brought about by the ingestion of morphia or opium is usually of an erythematous character, often resembling closely that of scarlet fever. It is more apt to attack the flexor surfaces, and is accompanied by severe itching. Occasionally complete desquamation of the epidermis takes place over the palms and soles, the epidermis being removable in the form of complete casts of hands or feet.

Quinine and Cinchona.—Although quinine and the preparations of bark have been in constant and extensive use for the past sixty years, yet comparatively few cases of eruption due to the use of this drug have been reported until within the last few years. As if to make up for lost time, however, a very large number of observations have been published of late, most, if not all, of which are quite authentic, and which place quinine among the drugs which are liable to cause eruptions in certain individuals. The prevailing type of quinine eruption is erythematous, closely resembling the rash of scarlatina or of measles. It first shows itself over the face and neck, but soon becomes diffused over the whole surface of the body. In exceptional cases it may not become generalised; sometimes, on desquamation, the epidermis of the hands and feet is shed as a whole. Occasionally the quinine eruption is papular in form, sometimes resembling erythema multiforme papulatum, or more frequently urticarious, with distressing burning, tingling, and itching.

Salicylic Acid.—Eruptions due to the ingestion of salicylic acid or the salicylates are not very unfrequent. In one case reported, a marked urticarious eruption occurred over the greater part of the body, especially the legs and abdomen, with œdema of the eyelids and arms. In another, vesicles and pustules on the hands and feet, accompanied by much sweating, were observed; they disappeared on the discontinuance of the drug.

With regard to the general pathology of medicinal eruptions, Dr. Van Harlingen does not think that our knowledge of the action of the drugs under consideration is sufficiently full and accurate to permit of any theory being brought forward which will satisfactorily account for the facts thus far observed. He remarks that a plausible attempt has been made by Behrend to classify the medicinal eruptions into two categories; one, where small doses of the drug bring out very quickly and by a sort of catalytic action some generalised eruption; the other, in which he includes the bromine and iodine eruptions, where the long-continued use of the drug seems to cause a saturation of the system, and where its elimination causes local disturbances having their chief seat about the glands. This theory cannot, however, be made to square with the facts, inasmuch as the occurrence of petechial eruptions would not be thus adequately explained, nor would the fact of the occurrence of exanthematous eruptions from iodine and bromine permit their separation from the other medicinal eruptions.

BEARD ON THE 'JUMPERS' OF MAINE.

IN a paper read before the American Neurological Association, in June 1880, Dr. G. M. Beard gives the results of his observations and study of a class of people found in the region of Moosehead Lake, in the northern part of Maine, and known there as 'Jumpers', or 'Jumping Frenchmen'. They are of Canadian birth, and of French descent; their occupation is mostly that of 'lumbering' in the Maine Woods.

The nervous phenomena, as seen in a man aged 27, and employed about the hotel, are thus described. While sitting in a chair, with a knife in his hand, with which he was about to cut his tobacco, he was struck sharply on the shoulder, and told to 'throw it'. He instantly threw the knife, and it stuck in a beam opposite; at the same time he repeated the order 'throw it' with a certain cry as of terror or alarm. A moment afterwards, while filling his pipe with tobacco, he was again slapped on the shoulder and told to 'throw it'. He threw the tobacco and the pipe on the grass, at least a rod away, with the same cry and the same suddenness and explosiveness of movement. When standing near one of the *employés* of the house, he was told to 'strike', and he struck him violently on the cheek. While holding a tumbler in his hand, he was told to 'throw it'. He dashed the tumbler with great violence to the floor, and then began deliberately picking up the pieces in a very quiet and patient way. A handkerchief was suddenly thrown before his eyes by a person walking stealthily from behind. He jumped, just as though he had been struck.

Another case in the house, a lad aged 16, was not so bad as this, but still presented all the phenomena: he jumped when he heard any sound from behind that was sharp and unexpected, and struck and threw when ordered to do so. The crowd around the hotel kept him constantly teased and annoyed, so that he had a stealthy, suspicious, and timid look in his eye, as though he expected each moment to be 'jumped'. This man, while playing with one of his mates, had thrown him to the ground; some one approached near and commanded 'Strike him', and he struck him very hard and explosively, with both hands. When standing by a window, he was suddenly commanded to 'jump' by a person on the other side of the window. He jumped straight up, half a foot off the floor, with a loud cry, repeating the order which had been given to him. When a command was uttered in a quick, loud voice, he repeated the order as he heard it, at the same time that he executed it. When told to strike, he said 'Strike' at the same time that he struck; when told to throw it, he said 'Throw it' at the same time that he threw whatever was in his hand. It made no difference what language was used. Tried with the first part of the first line of Homer's *Iliad*, and with the first part of Virgil's *Æneid*, in languages of which he knew nothing, he repeated quickly, almost violently, the sound as it was uttered, '*Menin Aida*', and '*Armi-vi*'. In order to have it repeated, it was necessary that the command should be very short, as well as quickly and strongly uttered. When the two 'Jumpers' were close together, they were commanded to 'strike': each struck the other simultaneously, not mild or polite, but severe and painful blows.

One day, while one of these men was shaving, the door slammed suddenly behind him; he jumped, and, had the razor been held in a different way, might have inflicted a severe wound. A 'Jumper' being surprised by an order to 'strike', while standing before a window, struck his fist right through the glass, cutting it severely. 'Jumpers' have been known to strike their fists against a red-hot stove, to jump into the fire, as also into water; indeed, no painfulness or peril of position has any effect on them; they are powerless, the absolute victims of the orders given them, or of the surprises played upon them; they must do as they are told, though it kill them, or though it kill others.

It is not essential that the surprises should come from a human being; any sound, from any source, that comes upon them with sufficient severity and suddenness, may cause them to jump and to cry. One man said that the falling of a tree in the woods, when unexpected, had the same effect upon him. Once he was so alarmed by this cause that he not only jumped, but was perfectly entranced, and could not move. The report of fire-arms or the screech of a whistle always causes a reflex spasm in these people. Although called 'Jumpers', they only *jump* in a minority of the experiments, the word jumping really including all such phenomena as lifting the shoulders, raising the hands, striking, throwing, crying, and tumbling. The order to 'drop it' they are compelled to obey, as well as those to strike, or to jump, or to throw. All the 'Jumpers' agree that it tires them to be very much jumped, and that they feel worse after it, whereas, after long periods of rest they become better, are less irritable, and jump less. The face does not always exhibit any change, but in some cases there is a temporary flushing, and in others a temporary pallor.

In discussing the nature of this affection, Dr. Beard remarks that the phenomena suggest epilepsy, particularly by their explosive character. The hands strike or throw with a quick, impulsive movement, which is very hard to imitate artificially, and is more like the explosion of a gun than the movement of the limbs of even an angry man. The cry suggests that heard in hysteria and epilepsy. Jumping is a psychical or mental form of nervous disease, and is of a functional character. Its best analogue is psychical or mental hysteria, the so-called 'servant-girl hysteria'. It occurs, like mental or psychical hysteria, not in the weak, nervous, and anæmic, but in persons otherwise healthy and robust. We are told that there are no stronger men in the woods, or anywhere, than some of the 'Jumpers': their peculiar symptoms neither shorten life nor lead to any other form of nervous disease; they are, in fact, interesting rather from a psychological than from a pathological point of view. The author believes that those who clearly recognise the two distinct types of hysteria, the neurasthenic or anæmic form (physical hysteria), and the mental or psychical form (psychical hysteria), will have little difficulty in comprehending the general nature of this jumping, and its position among the neuroses. Some of the cases of hysteria major on which Charcot has experimented, belong, he believes, to psychical or mental rather than to physical diseases.

Jumping is, therefore, we are told, a condition exhibiting in part the phenomena of trance, and bearing the same relation to trance that certain epileptoid conditions bear to epilepsy. Although the phenomena exhibited by the 'Jumpers' are analogous to those of mesmeric trance, as seen in the 'Jerkers' and 'Holy Rollers' in revivals, they differ from these and all allied forms of nervous disorders in the momentary character of the manifestations

and in the persistence and permanence of the liability to be excited. Once a 'Jumper', always a 'Jumper', expresses the prognosis.

Psychologically, the 'Jumpers' are modest, quiet, retiring, deficient in power of self-possession, conceit, and push, but not more so than many other persons of various races. They are at least as intelligent and as capable of fulfilling the duties belonging to them as the average of their associates who are not jumpers; some of them can read and write, and all could converse with a reasonable degree of intelligence. Jumping is fully as hereditary as insanity, epilepsy, or hay-fever. Dr. Beard found four families which made up a total of fourteen cases between them. It seems to be endemic in certain neighbourhoods, and to be psycho-contagious; that is, it can be caught by personal contact, like chorea and hysteria.

As to the origin of Jumping, the author suggests that it is probably an evolution of tickling. Some, if not all, of the 'Jumpers' are exceedingly ticklish. It would appear that in the evenings, in the woods, in lieu of other sources of amusement, the lumbermen have teased each other by tickling, and playing, and startling timid ones, until there has developed this jumping, which, by mental contagion, practice, and inheritance, has ripened into the full stage of a malady, which is really only an abnormally excessive development of a natural reflex excitability. In a certain sense we are all 'Jumpers'; under the sudden excitement of a blow, or of a violent, unexpected sound, any person may jump and cry somewhat as the 'Jumpers' do, though not with all the manifestations exhibited by them.

CHAS. S. W. COBBOLD, M.D.

POUSSON AND LALESQUE ON DISLOCATION OF THE SPINE.

IN the July number of the *Revue Mensuelle*, MM. A. Pousson and F. Lalesque give a detailed report of three cases of dislocation of the spine, observed in the Saint André Hospital at Bordeaux; and to this report they attach an interesting review, with regard both to clinical and to physiological data, of the effects produced on the spinal cord through displacement of the bodies of the vertebræ. The first case, the subject of which was a male aged forty, was one of fracture of the laminæ of the eleventh dorsal vertebra with consecutive dislocation of this in front of the twelfth; contusion of the cord; ascending myelitis; and death on the eleventh day. In the second and third cases, the cervical portion was the seat of injury. One was an instance of partial dislocation of the fifth cervical vertebra, causing death on the third day, in a male aged twenty-four: and in the third case, which terminated fatally within thirty-six hours, there was luxation forwards of the fourth cervical vertebra and rupture of its inferior cartilaginous disc. The patient in the last case was a man aged thirty-eight.

These cases present no special point of interest with regard to the character of the injury. The chief value of the contribution is due to the very rigorous analysis of the pathological facts made by the authors, with the view of testing the results that have been attained by experimental physiologists as to the functions of the spinal cord. With the exception of acute pain at a fixed point of the spine, which was noted in all three cases, and of mobility of the eleventh dorsal spinous process in the first case, the local signs were very obscure. In the third case, there was not any appreciable distortion of the spine at the supposed seat of injury, and the movements of the neck were preserved. The lesion in each of the cases of injury to the cervical region was beyond the reach of a finger introduced into the pharynx. In severe injury to the spine and cord, the activity of the brain may be suspended for a time, as one of the results of the general disturbance known as shock. In two of the above cases there was temporary loss of consciousness, and in the third case an inability to articulate. In each of the three cases, there was motor paralysis in the region supplied with nerves by the segment of the cord below the seat of injury. In the first case, as the seat of injury was near the origin of the first pair of lumbar nerves, the parts supplied by the lumbar and sacral plexus were paralysed, and voluntary motion of the lower extremities was abolished. In the other two cases, the brachial plexus had been cut off from the upper part of the cord, and therefore the upper extremities as well as the inferior were paralysed. In the second case, the motor paralysis of the upper extremities was not complete, and the loss of movement affected only certain groups of muscles, in consequence, probably, of integrity of certain channels of conduction in the midst of the disorganised parts. There was, in the third case, complete and immediate paralysis of motion. This seems to be exceptional; for, according to Gurlt, in cases of dislocation below the third cervical vertebra, complete and immediate motor paralysis has rarely been observed.

In cases of injury to the spinal cord, the area of lost sensibility usually corresponds very closely to that of motor paralysis. This might be expected, from the fact that the anterior and posterior roots emerge from the cord at the same level. In the first case, there was anæsthesia of the lower extremities and of the abdominal wall as high as the umbilicus. In the second and third cases, the area on the trunk of anæsthesia was limited by a line drawn through both nipples. There was loss of sensibility in the upper limbs in the third case, but not in the second case. Here there was persistence of sensibility, which, together with freedom from motor paralysis in certain groups of muscles, indicated that there was but incomplete disorganisation of the cord at the seat of injury. When all kinds of sensibility—to pain, touch and temperature—are abolished, as was made out in the first and third cases, it may be concluded that the whole thickness of the spinal cord has been involved in the injury. Marked hyperæsthesia, with intense pain just beyond the paralysed region, was noted in the second and third cases. In the first case, there was exaggerated reflex motion in the lower extremities. The phenomena observed in the other two cases were not in accordance with the theory that, whenever a portion of the spine is cut off from the encephalon, the excito-motor power of this portion, provided it remain sound and intact, becomes intensified. In the second case, not the least movement of the lower extremities could be excited by active stimulation of the integument. In the third case, the extensor muscles of the lower limbs contracted when the soles were touched, but over all the other paralysed parts the excito-motor action of the medullary exit remained indifferent to every kind of excitation. In these two cases, however, death occurred early and before the effects of shock had passed off. Besides, in each case the lower portion of the spine below the chief seat of injury was not quite sound, and hence the conditions of experimental physiology were not fulfilled.

Contraction and immobility of the pupils were noticed in the second and third cases, in which the lesion of the cord existed at the lower part of the cervical region. Neither palpebral stenosis nor injection of the conjunctiva was observed in any of the cases.

The penis was found to be turgescent in all three cases, and in one case, the third, there was marked erection. Voluntary micturition was abolished in every case, and it was found necessary to relieve the bladder by catheterism. The urine remained normal as to quantity; and in one case only, the first, did the physical and chemical characters become altered. In the other two cases, however, death occurred very soon after the date of injury. Changes in the quality of urine, which take place in cases of injury to the spine, though they come on suddenly and progress with much rapidity, do not usually occur until after an interval of some days. In the above case the excretion became turbid and alkaline, and had an ammoniacal odour, for the first time, on the fourth day; on the fifth day it was purulent.

Tympanites was observed in all the cases, and was excessive in the second, so as to interfere with respiration. This condition is due, not only to paralysis of the muscular fibres of the intestine, but also to failure of contractility of the abdominal muscles, which then offer no effective resistance to gaseous distension of the intestinal canal. Intestinal paralysis is usually manifested also by absence of stools. Fæcal incontinence, in cases of injury or disease of the spine, is to be regarded as a very unfavourable symptom. In the second case, involuntary discharge of fæcal matter commenced a few hours before death.

In all the cases the breathing was diaphragmatic, and both the thorax and the abdominal wall moved but passively and under the influence of the play of the diaphragm. The seat of the injury to the spinal cord accorded perfectly, in the second and third cases, with the symptoms that were observed. The lesion existing at the level of the fourth and fifth cervical vertebræ paralysed all the muscles of respiration save the diaphragm, supplied by the phrenic nerve emerging above the fourth cervical vertebra. In the first case, another reason must be found to explain the modification in the normal type of respiration; it is to be attributed, on the the one hand, to paralysis of the abdominal muscles, and, on the other hand, to violent pain experienced by the patient in the right hypochondrium. In pleurodynia and pleurisy the patient, in order to obtain relief, instinctively keeps at rest the painful side of the chest.

In cases of serious injury of the spinal cord there is paralysis of the vaso-motor nerves, determining a diminution of the arterial pressure, and giving rise to certain modifications in the character of the pulse. These changes were observed in each of the cases reported by MM. Pousson and Lalesque, and in the second case particularly remarkable changes in the pulse were made out on the second day, and when the effects of shock had passed off. It was noted that the radial pulse was strong, and that with each blood-wave there was a forcible impulse, but that at the same time the vessel was compressible. This impulse was still more marked in the larger arteries, as the femoral and the abdominal aorta. The sensation of a strong pulse is due to sudden variation of the arterial pressure in the vessel which is under the surgeon's finger. There is a feeble pressure in consequence of the vaso-motor paralysis, which, at the periphery, allows a ready flow of the blood from the arterial into the venous system; and this condition of feeble pressure passes suddenly into a condition of forcible pressure at the moment of the ventricular systole. The sphygmographic tracing presents, with pulse-modifications of this kind, a very high and vertically ascending line, and a concave and prolonged descending line. With regard to the number of cardiac beats, no deduction could be drawn from these cases. According to M. Marey, the movements of the heart in a given time are the more frequent, the less obstruction there is to overcome in the accomplishing of the ventricular systole. In these cases, therefore, as there was certainly diminution of the arterial pressure, and consequently a more ready flow of the blood-stream, an increase in the number of cardiac pulsations would have been expected. But in the first case only was there an acceleration of the pulse (112 to the minute): in the other two cases the pulse was 88 and 60. These facts, however, it is pointed out, do not really invalidate the law of Marey, since, in the second and third cases, the spinal lesion had involved the cervical enlargement and the region from which are derived the accelerator nerves of the heart. The authors failed to make out any precise results as to the temperature in these cases of spinal injury, in consequence of the disturbing influence of shock and consecutive inflammation. In conclusion, it is reported that, beyond some sloughing over the sacral region, in the first case, no indications of any trophic disturbance were observed.

W. JOHNSON SMITH.

THIN ON BACTERIUM FŒTIDUM.

DR. GEORGE THIN describes (*Proceedings of the Royal Society*, No. 205, 1880) the life-history of an organism which lives and multiplies in the stockings and inner surface of the boots of persons in whom profuse sweating of the feet is combined with eczema of the soles. The development of the organism, which is found in the stocking as swarms of micrococci, produces the intense fœtor which is characteristic of this affection. The growth of the organism was observed by cultivating it in vitreous humour in an incubator.

In studying the circle of changes through which the organism passed in the scum obtained from successive generations at different stages of development, their sequence was ascertained to be as follows. The bacterium, which was found in the stocking as a rounded element, when cultivated in vitreous humour in test-glasses, became first canoe- and then wedge-shaped, showing a distinct nuclear element contained with the surrounding protoplasm in a delicate sheath. The canoe-shaped bodies developed into rod-shaped bacteria, in which the nuclear element was lost. These rod-shaped bacteria grew larger, and divided so as to form other rods. Some of the rods, however, instead of dividing, grew to a great length, forming a tube containing an unbroken mass of protoplasm. In some of these long tubes the protoplasm broke up into segments, and, the delicate sheath between the segments giving way, ordinary rod-shaped bacteria were produced. This result seemed to depend on the nature of the cultivating fluid, as it came under observation in growths cultivated in turnip-infusion. What was generally observed in the cultivations in vitreous humour was the formation in these long tubes of round brightly refractive points, which multiplied until the sheath was filled with chains or rows of them. The sheath

then burst, and numbers of rounded bodies became free, not to be distinguished from the original elements described as micrococci, from which the development first took place. The cycle is thus identical with that observed and described as forming the life-history of the bacillus anthracis.

The fœtid odour of the stocking was reproduced in the cultivation glasses, but gradually diminished in strength with successive generations. The fluid of the eighth generation still had the characteristic smell, but, although recognised by the patient and the author, was not considered distinctive by a third person who had recognised the smell of the fourth generation. Mr. Lister informed the author that he has had a similar experience with the bacterium lactis, which, when cultivated in successive generations in urine, has its power to induce the lactic fermentation weakened, although not destroyed. Vitreous humour is a less favourable medium for the development of the organism, in so far as the production of the peculiar odour is concerned, than the mixture of sweat and serum in which it develops in the stocking.

In the *British Medical Journal* for September 18, Dr. Thin gives the details of a plan of treatment which he has found successful in an aggravated case of chronic sweating of the feet with eczematous discharge. He says: 'The stockings are changed twice daily, and the stocking-feet are placed for some hours in a jar containing a saturated solution of boracic acid. They are then dried, and are fit for wear again if it be desired. The boracic acid effectually destroys the smell. But to kill the bacteria in the stocking is not enough. The leather in the bottom of the boot is wet and sodden, and smells as vilely as the stocking. This difficulty is got over by the use of cork soles. I directed my patient to get half a dozen, which she finds sufficient. A pair must be worn only one day unchanged; at night, they are placed in the boracic jar, and are put aside the next day to dry. If these directions be accurately carried out, the evil smell is perfectly destroyed.

'The boracic acid solution is an excellent application to the painful skin in these cases. When the tender skin of the soles is washed with it, a sensation of coolness succeeds the feeling of heat and tension which are the usual accompaniments of the eczematous condition associated with the smell, and the skin becomes harder and loses its abnormal redness.

'The bacteric fluid would seem to act as a direct irritant to the skin. My patient assures me that, if she wear stockings which have been dried without being disinfected, irritation is speedily felt; and that the cork soles, if worn a second day without having been purified, act in a similar way.'

ROBERT SAUNDBY, M.D.

DOGIEL, WEBER, AND SUCHARD, ON THE ARRANGEMENT OF THE RED BLOOD-CORPUSCLES IN ROULEAUX.

M. DOGIEL, in a recent memoir, refers to the well-known and generally accepted opinions of Wœlcker, that the arrangement of the blood-corpuscles in rouleaux can be explained by the attraction that these small bodies floating in a fluid have for one another; hence their tendency to adhere closely by their largest surfaces. M. Dogiel maintains that this fact by itself does not explain the solidity of the piles or rouleaux, nor their resistance to external violence and pressure. He believes with Robin, that the close adherence of the corpuscles is owing to the presence of a special substance. This substance, M. Dogiel believes to be fibrin. He bases his belief on the following facts.

1. Every condition that favours the formation of fibrin also favours that of the rouleaux; likewise, every condition that prevails or retards the coagulation of fibrin impedes the formation of rouleaux.

2. When two closely adherent red blood-corpuscles are separated by the aid of a reagent or mechanical means, a thin filament appears between them. It is evident after a little time that this filament is fibrin. Dogiel asserts that fibrin is not completely eliminated from the blood by the process of stirring it with a glass rod or a bundle of twigs, for it is well known that rouleaux form in blood thus defibrinated, but they form slowly and imperfectly. MM. E. Weber and Suchard (*Archives de Physiologie Normale et Pathologique*, July and August 1880) draw attention to the fact that in a preparation of blood the first filaments of fibrin are not seen until an interval of two minutes in summer and five in winter have elapsed; further, more corpuscles are arranged in rouleaux, however short may be the time that intervenes between obtaining the blood and examining the preparation. As to the fact that a 10 per cent. salt solution, or sodium carbonate, retards the formation of rouleaux, it is not because these reagents prevent the formation of fibrin, but because they alter the shape of the corpuscles. Dogiel is ignorant of what is well known to those accustomed to reckon blood-corpuscles—that 8 per cent. of nitrate of potash, 5 per cent. of sodium sulphate, 1 per cent. of sodium carbonate, 7 per cent. of sodium chloride, alter but slightly the shape of the blood-corpuscles, and retard considerably the formation of fibrin.

MM. Weber and Suchard believe that the non-formation of rouleaux ought to be attributed to the alteration in the shape of the corpuscles, and not to the noncoagulation of the fibrin; for, indeed, if sodium sulphate be added to blood, fibrin is formed some hours afterwards, but there are no rouleaux. Again, in defibrinated blood the corpuscles arrange themselves in rouleaux, notwithstanding M. Dogiel's assertion to the contrary. The authors of this memoir, to prove the truth of what they advance, call attention to the slowness with which blood coagulates in the vessels, and state that, on examining a small mesenteric vein on an animal recently killed, the blood-corpuscles are seen arranged in piles; also, if on a living animal a vein be ligatured in two places, and the blood of the segment thus limited be fixed by an injection of osmic acid, it will be seen to be composed principally of corpuscles arranged in rouleaux or piles. The authors ask if this arrangement of the blood-corpuscles in piles persists during circulation. To arrive at an answer, they examined a mesenteric vein on a living animal, and saw distinctly the corpuscles moving in the vein arranged in piles. This arrangement remained unchanged in the small vessel. Disunion of the rouleaux or piles took place when it anastomosed with a larger one in which the blood circulated more quickly. The calibre of the vessel under examination was sufficient to allow the corpuscles to circulate several abreast.

With regard to the filaments that Dogiel asserts to be fine threads of fibrin, MM. Weber and Suchard give the following information. Defibrinated blood of dogs or horses is the best for purposes of

experiment. If a slight pressure be brought to bear on the object-glass, two blood-corpuscles closely adherent separate and become elongated, but remain connected by a filament twice or three times as long as a blood-corpuscle. This filament becomes thinner and thinner the farther it extends from the corpuscle, its starting-point. In the middle, it reaches its maximum of thinness. Its color and refracting power are identical with those of the corpuscle. It is impossible to discover any evidence of a line of demarcation indicating the presence of an uniting substance between the blood-corpuscles. When the filament breaks, the corpuscles reassume their roundness, and no trace of it can be detected either in the corpuscle or in the preparation. These filaments are present in a preparation of blood in which the fibrin is coagulated; also, once formed, they do not change, whereas the interglobular filaments are remarkably changeable. Finally, as a fundamental difference, the fact is cited that the fibrinous filaments resist the action of water and that of many other reagents, and the interglobular filaments disappear. The authors are of opinion that the firm adhesion of the corpuscles in rouleaux, likewise their solidity, are to be attributed to the physical properties of the red corpuscles, inasmuch as these corpuscles are very ductile and very malleable, of a semi-solid, almost viscous consistency, and, as M. Ranvier has demonstrated, are eminently self-adhesive. When the nucleolus of a red blood-corpuscle escapes, it is impossible to discover the spot where the membrane has been ruptured to allow it free passage. It is evident that, the longer the blood-corpuscles adhere to each other, the firmer is their adhesion; and it is easily conceivable that, when they are separated, the ductile substance which joins them is drawn out like soft paste, and the separation takes place just at the point of union, where, naturally, the resistance is less. MM. Weber and Suchard do not think that the close union of the adherent corpuscles is owing to an intervening substance (fibrin or other), but to that of the corpuscle. Blood-corpuscles, hardened like those treated by osmic acid, show no tendency to group themselves in rouleaux, no matter how numerous they are in the fluid in which they float. W. VIGNAL.

LABUS ON THE INFLUENCE OF RELAXATION OF THE UVULA ON THE VOICE.

THE following observations form the abstract of a paper read at the First International Congress of Laryngology, held lately at Milan, by Dr. Carlo Labus, president of the Congress, etc., and are the result of experience derived from many years' practice in that city, which may well be considered as the centre of the operatic world. Dr. Labus has had the opportunity of examining the vocal organs of an unusually large number of singers, and of observing the affections that produce a change in the voice. From statistics given in another paper on the question of chronic laryngitis as affecting singers, and published last June, it appears that Dr. Labus has taken notes of the cases of 1,132 singers who have applied to him for treatment, and it is interesting to note the classification of their voices.

Soprani, mezzo-soprani, and contralti (females)			563
Tenors - -	(males)	- - - 309	569
Baritones and basses		- - - 260	

Dr. Labus finds that relaxation of the uvula is a by no means unusual cause of impaired voice, and considers that it deserves a greater degree of attention than it has so far received, and especially because it is often overlooked. Disorder of phonation from this cause is due not so much to elongation of the uvula as to the difficulty which, on account of its relaxed condition, the subject experiences in making various necessary movements of the soft palate during the formation of different sounds. He has observed that the uvula remains pendant in the chest-notes, becomes slightly contracted in the mixed voice, and finally in the treble notes becomes entirely straightened, swinging upwards and backwards so as to take a horizontal position, and to close more or less the naso-pharyngeal cavity.

Believing with Helmholtz that the cavity of the upper throat is a resonator, it follows, in his opinion, that all modifications in the conformations of the pharyngo-naso-buccal cavity must influence the harmonic tones, and consequently the quality and fulness of sound. Nothing is easier to understand than that the uvula, situated as it is at the point of union of these three cavities, when once relaxed, no longer permits them to assume the wished-for conformation.

Singers, suffering from an unduly relaxed uvula, complain that the voice has lost in strength, and become hollow and thin; of inability to preserve an even colouring during emission of certain notes in the middle and upper registers; of inability to sing any longer on the open Italian vowel *a* (*ah*), being obliged to substitute the sounds of *e* or *u* (*eh* or *oo*); of necessity for 'forcing' the voice, which produces falseness, with fatigue and pain (due to exaggerated or supplementary muscular exertions), facial grimaces, and finally a vocal *tremolo*, eminently disagreeable to the ear.

Relaxation of the uvula is of two kinds, of which infiltration and hypertrophy of the submucous tissue is the kind most commonly seen, accompanied not unfrequently by hypertrophy of the azygos muscle; the second kind is due to paresis or even complete paralysis of the same muscle. It is this last-named form which often escapes observation, for the uvula is apparently in a normal condition, and the laryngoscopic mirror, applied to discover lower down the voice-defect, conceals the fact that the uvula remains immobile during production of the emitted notes.

Amongst exciting causes must be noted the diffusion of a coryza, irritations produced by alcoholic drinks, and particularly by tobacco, weeping, singing from the throat, and abuse of the *timbre sombré*.

From his experience, Dr. Labus believes only in a radical cure, namely, that of removal of so much of the relaxed uvula as is deemed necessary, according to the varying condition in each patient. In no case should the ablation be entire, but merely sufficient to restore to the resonating portion of the organ its normal volume and form. He has performed many of these operations, and has *never observed a deterioration of the voice*, but on the contrary his patients have almost invariably assured him of an amelioration.

LENNOX BROWNE.

KRASKE ON CARDEN'S AMPUTATION.

THE thirty-fifth number of the *Centralblatt für Chirurgie* contains a report by Dr. P. Kraske, of Halle, on the results from Carden's or the transcondyloid

amputation of the thigh, obtained in Volkmann's clinique during the past seven years, and since the introduction of the antiseptic method into surgical practice. In this report, it is pointed out that what was alleged to be a very favourable condition of the operation when first proposed, need not at the present day be taken into consideration in any judgment of the value of the proceeding. Before the antiseptic period in surgery, the chief advantage of Carden's method of amputation consisted in the fact that, as the medullary canal was not exposed, the risks of osteo-myelitis were thus much diminished. Now, however, where Lister's practice is carried out, no distinction can be made, with regard to the resulting mortality, between amputations which do and those which do not expose the medullary canal.

Carden's operation, though it has lost one of its special advantages, is yet to be regarded, Dr. Kraske holds, as the best amputation for the lower part of the thigh. No other is capable of affording such good *functional* results. In consequence of the length of the stump, the patient is able to walk with much ease and security; and in many instances the weight of the body, both in locomotion and in standing, can be supported on the extremity of the thigh. This extremity is very broad, and, in cases where the healing of the stump has progressed favourably, is covered by healthy and intact skin. The cicatrix in such favourable instances is situated on the posterior surface of the stump, where it is protected against pressure.

Though in many of his cases Volkmann has observed a very useful stump after Carden's amputation, the results of the operation in this respect are not always so satisfactory. The extremity of the stump is often very tender, and the patient is unable to bear any pressure on it during locomotion. This condition is almost always the result of mortification of the anterior flap, which, unfortunately, often occurs after the operation, especially in old and debilitated subjects. When the whole or a considerable portion of this flap has been destroyed through sloughing, a broad adherent cicatrix is formed, rendering the stump almost useless, and often necessitating subsequent resection of the bone.

In order to guard against sloughing of the anterior flap, the author thinks it better to take a shorter flap from the front of the limb, and to dissect out from the popliteal region a flap extending as far downwards as the head of the fibula. Both flaps, which are formed of skin only, having been turned upwards, the leg is to be separated at the knee, and the patella then removed. The femur should be sawn through at the thickest part, and its sharp margins, especially in front, be rounded off by bone-pliers. If the synovial pouch under the extensor muscles extend far upwards, an incision should be made into it at its upper extremity, and a drainage-tube be passed from the surface of the limb. A small piece of drainage-tube is inserted at each angle of the wound, and care is taken to maintain the anterior flap in close contact with the whole of the sawn surface of the femur.

In all the cases of Carden's amputation performed by Volkmann during the past three years, the treatment of the wound has been strictly antiseptic. In several instances the result was fatal, but in most of these death was due to the association of multiple injuries, or of other complications. In not a single case treated according to Lister's method, did phlegmon, diffuse suppuration, or erysipelas occur.

When the stump has so far healed as to permit the patient to move about with the aid of some artificial support, use should at first be made, according to Dr. Kraske, of an ordinary wooden leg with bucket, the pressure of which must be received at the tuber ischii, and within which the stump for a time is allowed to hang freely. Pressure should then be gradually applied to the extremity of the stump, by inserting at intervals at the bottom of the bucket successive layers of wadding or of leather. It is regarded as a point of much importance that the patient should commence as soon as possible to go about, and to use his stump as an agent of support. It is only by early exercise of the stump, that atrophy of the bone, and consequent uselessness of the extremity, can be prevented.

During the past seven years, Volkmann has in thirty-two instances performed Carden's amputation under antiseptic conditions. In twenty-five of these cases the result was successful, and the patients, nine of whom were between fifty and eighty-four years of age, made good recovery. In three of the seven fatal cases, death was due to severe multiple injuries, necessitating double amputation, in one case to tetanus, in two cases to exhaustion through prolonged suppuration, and in the last case to gangrene of the stump and secondary hæmorrhage from the main artery.

W. JOHNSON SMITH.

ROCHARD AND LITTLE ON THE TREATMENT OF ABSCESS OF THE LIVER.

IN a recent communication (*Bulletin de l'Académie de Médecine*, No. 43, 1880), M. J. Rochard describes the treatment of hepatic abscess by free and direct incision, combined with the practice of Lister's antiseptic method. Three cases are reported, in which this treatment was carried out with complete success by Dr. Stromeyer Little of Shanghai.

Abscess of the liver, M. Rochard states, when not treated surgically, causes death in about 80 per cent. of the cases. The old methods of surgical treatment have not reduced this rate of mortality to any great extent; certainly, in cases of large abscess, to not less than 68 per cent. Consequently, surgeons have not been eager in interfering, and some, with Dr. Maclean, in consideration of the prolonged suppuration resulting from the opening of a large hepatic abscess, and of the putrefaction of pus and the gangrene consequent on the penetration of air into the large cavity, have declined to intervene. Most surgeons who have to deal with cases of this kind, think it right to open the abscess, but, before doing so, wait until œdema and redness of the abdominal wall have indicated the point to which the pus is making its way, and often whilst waiting lose their patient, or find that the abscess has burst internally. Finally, in cases where such practice is successful, the cure is attained at the price to the patient of many months of suffering and danger. A method which would permit the surgeon to act in good time, to operate with certainty, and to effect a cure within one month, must be regarded as constituting considerable progress. That such progress has been made seems, according to M. Rochard, to be proved by the results of the treatment carried out in the three recorded cases. Dr. Little had previously treated twenty cases of hepatic abscess either by frequently repeated puncture and aspiration, or by incision without any antiseptic precautions. All the patients died with the exception of one, in whom a small

abscess with a chronic course projected into the epigastric region, and was opened there without any bad results. In his three recent cases, Dr. Little had recourse to the method described and discussed in M. Rochard's communication. This method consists in determining, with as much precision as possible, the seat of the purulent collection; in verifying the diagnosis by puncture and aspiration; then using the needle as a conductor, making a free incision into the abscess, clearing out all the contents, and, finally, preventing consecutive mischief by antiseptic injections, drainage, and Listerian dressings. The diagnosis of abscess of the liver, M. Rochard points out, is not easy. Local pain is not manifested until the pus has reached the surface of the organ, and perihepatitis has been excited. This symptom is often absent, even in cases of very large hepatic abscess. Reflex pain in the right shoulder, also, is very frequently absent. The only symptoms on which reliance can be placed, are increase in the size of the organ, digestive and respiratory disturbances, and fever. In most of the cases, the hepatitis succeeds dysentery or dysenteric diarrhœa. When, in a subject who has suffered from either of these affections, fever occurs, the digestion becomes disturbed, and the liver enlarges, it may be concluded that hepatitis has been developed. If the fever present a remittent character, with evening exacerbations, preceded by rigors and followed by sweating, the formation of an abscess should be expected, and steps at once taken to test this diagnosis by puncture and aspiration. The abscess is situated in the right lobe in seven out of ten cases, and in most cases projects at the convex surface of the organ. The dulness then extends towards the nipple, and is bounded by a curve with its convexity upwards. The patient is troubled by cough, dyspnœa, and pain during inspiration, and occasionally auscultation and percussion reveal the signs of diaphragmatic pleurisy. In a case of this kind, the most favourable seat of an exploratory puncture would be the eighth or ninth intercostal space, in a line with the anterior border of the axilla. When the purulent collection projects at the concave surface of the liver, the false ribs are expanded, and the extent of the swelling may be made out by palpation. The spontaneous pains, when they occur, radiate towards the iliac fossæ and the sacral region. Vomiting is a frequent symptom. An exploratory puncture in such case is best made below the margin of the eighth rib, and at the point where there is tenderness on pressure.

The preliminary puncture is made by Dr. Little with a needle about three millimètres in diameter, the instrument having been dipped in carbolic oil, and the integument of the right hypochondrium washed with a 5 per cent. solution of carbolic acid. It is often found necessary to introduce the needle several times before pus can be obtained. These repeated punctures of the liver, as has been proved by the observations of Jaccoud and Lavigerie, are absolutely free from danger.

When the presence of pus has been made out, a free incision through the whole thickness of the abdominal wall is made by the side of the needle, and parallel to the ribs. The evacuation of the fluid contents of the abscess is facilitated by the introduction of forceps between the lips of the wound, and by expansion of the blades, and also by the transmission of manual pressure through the abdominal wall to the inferior surface of the liver. The cavity of the abscess is then washed out with a weak solution of carbolic acid, until no traces of pus, of flakes and of portions of slough, can any longer be seen in the returning current of the injected fluid. A piece of drainage-tubing of very wide calibre is then passed to the bottom of the cavity, the outer portion of this being cut off on a level with the wound. Application is then made of the ordinary antiseptic dressing of gauze with protective and jaconette, which dressing is maintained by means of an elastic bandage. This dressing is changed daily, and at the same time the protruded portion of the drainage-tube is cut away. The results of this treatment in the three cases treated by Dr. Stromeyer Little were most satisfactory. The operation in each instance was immediately followed by improvement in the general condition of the patient. There was also immediate disappearance of fever, and complete absence, during the subsequent treatment, of any febrile reaction. In two cases, complete cure was attained within one month, and in the third case, in which a second operation was necessitated through relapse, the patient was able to travel on the seventy-sixth day. W. JOHNSON SMITH.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. MURRELL, W. — Chaulmoogra Oil in Phthisis. (*British Medical Joural*, Nov. 1880, p. 844.)
2. YEO, I. B.—Treatment of Asthma by the Induced Current. (*Lancet*, Nov. 1880, p. 761.)
3. BOOTH, J. M.—Toleration of Opium in an Infant. (*British Medical Journal*, Nov. 1880, p. 775.)
4. DRUMMOND, D.—Casca Bark. (*Lancet*, Nov. 1880, p. 764.)
5. MORRIS and OTHERS.—Chian Turpentine in Cancer. (*Lancet*, Nov. 1880, pp. 844, 886.)
6. CROMBIE, A.—Combined Use of Morphia and Chloroform. (*Practitioner*, Dec. 1880, p. 401.)
7. ROBERTS, C.—Calomel applied locally. (*British Medical Journal*, Dec. 1880, p. 881.)
8. HOLTHOUSE, C.—Oxide of Zinc in Sweating Feet. (*British Medical Journal*, Nov. 1880.)
9. ROBSON, A. W. M.—Nitro-Glycerine in Acute and Chronic Bright's Disease. (*British Medical Journal*, Nov. 1880, p. 803.)
10. MACEWEN, W. — Administration of Chloroform through a Tracheal Tube introduced into the Glottis. (*Lancet*, Nov. 1880, p. 813.)
11. DE LA MOTTE and DIVER.—The Danger of giving Opium in combination with Chloral and Bromide of Potassium. (*Lancet*, Nov. 1880, p. 873.)
12. RINGER, S.—Physiological Action of Tulipine. (*Practitioner*, October 1880, p. 241.)
13. GIBSON, GEORGE A.—Digitalis in Heart-Disease. (*Birmingham Medical Review*, Oct. 1880.)
14. GOSS, I. G. M.—Actinomeris Helianthoides. (*New York Medical Journal.*)
15. ORDYLOWSKI.—The Value of Chloral in Phthisis. (*Gazette des Hôpitaux.*)
16. SAUNDERS.—Diabetes Insipidus Cured by Ergot. (*St. Louis Courier of Medicine.*)
17. VAUTHIER.—On Maize and Maizenic Acid. (*Archives Médicales Belges*, Aug. 1880.)
18. Guaco as a Remedy for Snake-Bites. (*Pharmaceutical Journal.*)
19. CHOWN.—On a Method of Determining the Relative Value of Certain Antiseptics.
20. VERARDINI.—On the Depressant Action of Ipecacuanha. (*Bulletino delle Scienze Mediche, September* 1880.)

1. *Murrell on Chaulmoogra Oil in Phthisis.*—Dr. Murrell (*Brit. Med. Journ.*, Nov. 1880, p. 844) has used the chaulmoogra oil in 59 cases of phthisis. In 31 cases, three drops were given three or four times a day in milk, the dose being gradually increased, week by week, to as much as could be borne. Ten minims was about the limit. Twenty-four of the cases improved under treatment. In 23 cases, the oil was used by inunction, two to four ounces being rubbed into the chest weekly; this plan yielded the best results. [The paper by Dr. Burney Yeo, contributed to the *Practitioner*, April 1879, p. 241, is referred to in the LONDON MEDICAL RECORD, June 1879, p. 222. Here it is stated 'the taste was most repugnant to most of the patients, and in no instance could any real benefit be attributed to its use'.—*Rep.*]

2. *Yeo on the Treatment of Asthma by the Induced Current.*—In the *Lancet*, November 1880, p. 761, Dr. Burney Yeo reports a case of aggravated asthma, under the care of Dr. Schmitz of Neuenahr, which was apparently completely cured by the induced current. The patient, aged 40, had suffered severely for more than six years. All manner of means having failed to relieve, Dr. Schmitz applied galvanism twice a day, and, after six days, the patient seemed quite cured. The influence of the treatment was so complete that the gait and carriage were totally changed, the bent stooping figure of the asthmatic being as upright as his fellows. The galvanic current was applied to the throat, in the situation of the great nerve-trunks, the vagus and sympathetic, each pole being applied just below the angle of the jaw and in front of the sterno-cleido-mastoideus. The current was continued for fifteen minutes at each sitting. Dr. Max Schaeffer regards the attacks of idiopathic asthma as due to tonic spasm of the middle and finer bronchial tubes; these spasms being secondary to hyperæmic changes in the mucous membrane due to vaso-motor influences of the vagus. According to this view, asthma is an irritative and reflex pulmonary neurosis. Asthma may depend upon morbid states affecting (1) the nerve itself, or (2) the coverings of the nerve, or (3) the tissues adjacent to the nerve. Dr. Max Schaeffer lays great stress on the third condition—viz., morbid state of the tissues adjacent to the nerves, and carefully examines the mucous membranes and glands in the upper part of the respiratory tract—the pharynx, larynx, and trachea. He states that, in the most severe cases, the treatment by galvanism has acted 'like witchcraft'. The constant current never does good, but the induced never fails. [In the *Medical Digest*, section 660:4, is a reference to four cases treated by static electricity, by Dr. Poggioli, in which a rapid and permanent cure was effected after failure of all other means. These cases were published in the *Gaz. Hebd. de Med. et Chir.*, December 4th, 1863. The value of painting iodine over the course of the vagi in the neck, as insisted upon by Dr. Robert Saundby, in the *British Medical Journal*, November 1880, p. 808, has a direct bearing upon the cases given above.—*Rep.*]

3. *Booth on Toleration of Opium in an Infant.*—In the *British Medical Journal*, November 1880, p. 775, Dr. Mackenzie Booth gives further details of this case, which was noticed in the LONDON MEDICAL RECORD, May 1880, p. 272. At the age of four months, an infant was taking, for colic, six to eight drachms of laudanum in twenty-four hours. The child, when seen, was miserably emaciated, and Dr. Booth advised giving ten drops less *per diem*, administering cod-liver oil, with bismuth and pepsin. Gradually the laudanum was withdrawn, and, in less than a month, entirely stopped. The child is now in perfect health.

4. *Drummond on Casca Bark.*—In the *Lancet*, November 1880, p. 764, Dr. David Drummond thus sums up the results of a small series of experiments with this drug. 'It is undoubtedly a very useful addition to our somewhat restricted list of therapeutic agents in the treatment of cardiac cases, tending, like digitalis, to lower the pulse-rate, and, whilst increasing the force of the systole, to render the heart more regular. In comparing the two drugs, whilst recognising the value of casca, I think digitalis is the more reliable remedy of the two; it seems to act more rapidly and with more certainty. It may, however, yet be found that the cases in which each drug is to be employed might be selected; some cases requiring perhaps stimulation of the cardio-inhibitory centre in the medulla—casca, whilst others may be best suited by a remedy which acts on the peripheral inhibitory apparatus in the heart—digitalis.'

5. *Morris and others on Chian Turpentine in Cancer.*—Mr. Henry Morris relates in the *Lancet*, November 1880, pp. 844, 886, a series of cases of cancer, in which Chian turpentine, after fair trial, utterly failed to cause the slightest improvement. At page 864 it is stated that the Medical Committee of the Middlesex Hospital have resolved that no more Chian turpentine be ordered, as, after a prolonged and careful trial, it had been found perfectly negative in its results in the treatment of cancer. At p. 955, Mr. John Clay replies with unabated confidence. In the *Medical Times and Gazette*, November 1880, p. 590, a case, under the care of Dr. Playfair, is reported, which, originally diagnosed as rapidly advancing malignant disease of the body and fundus uteri, greatly improved while under treatment by Chian turpentine. 'To everybody's surprise, in about ten days marked improvement was observed; the pain and hæmorrhage had ceased, and there was no longer any fœtor.' Examination proved that the real nature of the case was a sloughing fibroid which had been spontaneously extruded.

6. *Crombie on the combined use of Morphia and Chloroform.*—In the *Practitioner*, December 1880, p. 401, Dr. Alexander Crombie brings forward strong proofs of the great advantage accruing from a hypodermic injection of morphia, of one-sixth to one-third of a grain, at the commencement of chloroform inhalation. By this means very little chloroform is required; hence very little danger can arise, except in those rare instances of idiosyncrasy, where a mere whiff may be followed by urgent symptoms. Sickness follows in the minimum number of cases, hence it is invaluable in eye operations; and, lastly, anæsthesia is maintained for a very lengthened period, an advantage only appreciated by those who are accustomed to mouth operations, and here, even if consciousness commences to return, a very few inhalations suffice to reproduce complete anæsthesia. Dr. Crombie uses a metal cup, covering loosely the mouth and nose, containing lint wetted with chloroform, so as to admit air very freely at each inspiration. The administrator divides his attention between the respiration and the sensitiveness or otherwise of the conjunctiva. As soon as the relaxed muscles of the jaw admit, Dr. Crombie pushes the condyle of the lower jaw out of the glenoid cavity, on to the eminence in front. By

this means the tongue is carried well forward, and all necessity for tongue-forceps avoided. If there be the least stertor, it is evident that this position of the jaw is not properly maintained. As ether cannot be used in India, where Dr. Crombie is practising, on account of the heat, it is of great importance to make most fully known how, thus practically, to rob chloroform of all its dangers. [Dr. Crombie is in error in attributing to Claude Bernard the remarkable observations on the effects of morphia in reproducing and prolonging the anæsthetic action of chloroform. The earliest notice appears to have been made by Mr. Moore at the meeting of the Royal Medical and Chirurgical Society, when Mr. Hunter's paper upon the hypodermic administration of certain medicines was brought forward and discussed. On that occasion (*Lancet*, June 1865, p. 654) Mr. Moore thus spoke: 'But the most important practical use he had made of the hypodermic plan was, that of prolonging the chloroform sleep for a long period after an operation. He first employed it more than three years ago, and he believed it had since been adopted by others'.—*Rep.*]

7. *Roberts on Calomel applied locally.*—In the *British Medical Journal*, December 1880, p. 881, Mr. Charles Roberts describes and illustrates a very ingenious and simple apparatus for applying calomel to the throat without the aid of heat. The drug is placed in a wide-mouthed flask, fitted with a bored cork, holding two tubes, one passing to the bottom of the flask and connected with a hand-bellows, the other just piercing the cork, and bent at right angles, to pass into the mouth of the patient. Air, blown through the dry powder, raises it in sufficient fine particles to cover the mucous membrane of the fauces. Messrs. Blaise and Co., St. James's Street, made Mr. Roberts a vulcanite cap, containing the two tubes, that could be screwed into the centre of a cork and readily fitted to any wide-mouthed bottle.

8. *Holthouse on Oxide of Zinc in Sweating Feet.*—Mr. Holthouse (*British Medical Journal*, Nov. 1880) brings forward a very simple and, in his hands, efficacious method of treating this extremely unpleasant complaint. After a free use of soap and water, oxide of zinc powder is well dusted over the dried foot. In one case, two applications permanently cured; in others, the cure was scarcely so rapid, but still quite as satisfactory.

9. *Robson on Nitro-Glycerine in Acute and Chronic Bright's Disease, and in the Vascular Tension of the Aged.*—Mr. Mayo Robson reports in the *British Medical Journal*, November 1880, p. 803, some very striking results of the use of this powerful agent in the treatment of various diseases of the kidney, in all of which vascular tension was relieved, and the albuminuria, hæmaturia, or anasarca removed. One case, in which apoplexy threatened, was at once relieved by minim doses of the one per cent. solution, thrice a day, and, on every return of dizziness, recourse was had to the mixture with the same result. Seven cases are given in detail, and are well worthy a careful perusal.

10. *Macewen on Administration of Chloroform through a Tracheal Tube introduced through the Glottis.*—In the *Lancet*, November 1880, p. 813, Dr. Macewen reports the fourth of a series of cases where, in a man, aged 45, he had excised a cancerous tongue, giving chloroform by a tube introduced through the glottis. The tube projected several inches beyond the mouth, and the anæsthetic was given continuously during the operation without in any way interfering with the operator.

11. *De la Motte and Diver on danger of giving Opium in combination with Chloral and Bromide of Potassium.*—In the LONDON MEDICAL RECORD will be found at p. 141, April 1880, a note of this danger, and the case of the late Mr. Amphlett (*Lancet*, September 1880, p. 523) confirms Mr. De la Motte's statement. Another case, reported by Dr. Diver (*Lancet*, November 1880, p. 873), adds considerably to the value of the observation. A woman, suffering from delirium tremens, had taken more than a drachm of chloral in divided doses. The excitement continuing, a third of a grain of morphia was injected. Ten minutes subsequently, she stretched out her arms saying, she 'felt stiff and sinking'. The face was drawn and rigid, and the heart's action very feeble. Presently, with a sharp sudden cry, she fell back as though dead. After a period of intense anxiety to those around, a flickering pulse was felt, and life returned.

12. *Ringer on the Physiological Action of Tulipine.*—In the *Practitioner*, October 1880, p. 241, Dr. Ringer gives the results of a series of experiments with the alkaloid extracted from the bulb, leaves, and flowers, of the garden tulip; a pound of the plant yielding a grain of nitrate of tulipine. The results are thus summarised. 'Tulipine differs almost entirely from the action of alkaloids derived from the plants belonging to the natural order Amaryllidaceæ, so far as I have examined. Tulipine is a muscle-poison, affecting the muscles like veratria. It is, however, weaker than veratria. It paralyses either the cord or the afferent nerves, or both; but probably it affects the afferent nerves. Its action on the motor nerves, if any, is slight. It affects the heart of frogs like veratria. It does not affect the pupil.'

RICHARD NEALE, M.D.

13. *Gibson on Digitalis in Heart-Disease.*—The author (*Birmingham Med. Review*, October 1880) begins with a few general rules to be borne in mind respecting the uses of digitalis. The relation of the cardiac muscle to the work to be done is the sole guide, and it matters very little which valve it is that is affected. Arterial tension must be kept up as near the normal standard as the arteries can bear. In all cases of loss of cardiac power, digitalis is imperatively demanded. Simple weakness may arise from any cause which lowers the general standard of the entire system. Spanæmia and allied conditions seriously impair the strength of the heart, and beget a curable regurgitation at the venous orifices. In these cases, arsenic and iron will correct the malady, but a few days' treatment with digitalis materially hastens the cure. When from strain the heart has been partially incapacitated for work, the same treatment is of value, and soon restores the cardiac muscle to perfect soundness. In the adynamic heat of fever, the use of this agent is of the most eminent value. In syncope and collapse, the use of digitalis in large doses has been followed by marvellous success. It also proves of value in fatty degeneration of the heart; the nourishment of the cardiac tissue is so much improved by this drug that advanced fatty degeneration cannot fail to be somewhat checked by its use. Aortic stenosis and aortic incompetence require digitalis only when the heart is unequal to the work demanded of it. In mitral disease digitalis controls the irregular action, and so prevents the dissipation of energy. In all cases it is necessary to aid the action of digitalis by giving plenty of nourishment. When there is anæmia,

iron or arsenic, or both, should be administered in conjunction with digitalis. It is difficult to lay down rules as to dosage, but often it is necessary to give the tincture in half drachm, or even drachm doses, frequently. The safest test by which to judge of the influence of digitalis on the circulation is the quantity of urine passed. As long as the quantity is in excess of that passed before the digitalis was administered, all is well; but, when it decreases, it is time to stop the drug. It is often noticed, that the greatest amount of diuresis by the action of digitalis occurs just after suspending its use.

WILLIAM MURRELL, M.D.

14. *Goss on Actinomeris Helianthoides.*—The root of actinomeris helianthoides is from the size of a quill to that of a knitting-needle, and has an oil and perhaps a resin in it, giving it the taste and somewhat the smell of turpentine. It has long been used by the people of Upper Georgia in dropsy, under the name of diabetes weed. Dr. I. G. M. Goss says (*New York Medical Journal*) that he has used it in several obstinate cases of dropsy and in several cases of chronic cystitis with fine effect; also in calculous affections and in chronic inflammation of the entire urinary tract. He gives it in the form of a tincture, one or two drachms to a dose, as a diuretic, or as an infusion, in doses of one-half to one ounce, repeated every hour or two. It may be tinctured in sweet spirit of nitre, eight to sixteen ounces of nitre.

15. *Ordylowski on the Value of Chloral in Phthisis.*—M. Ordylowski (*Gazette des Hôpitaux*) draws attention to the value of chloral in phthisis. His observations included fifteen cases, of which only two did not have cavities. The drug was given in capsules, in doses of fifteen to thirty grains at bedtime; and the patients then drank a glass of water. No bad symptom was noticed in any of the cases. The sleep was peaceable, the physical symptoms were less distressing in the morning, and the patients felt better and stronger, and never complained of headache. Whenever the chloral was discontinued the insomnia reappeared. The author alleges that, in addition to relieving the insomnia, the chloral diminishes the night-sweats, checks somewhat the loss of weight, lowers the temperature, increases the urinary secretion, and improves the morale.

16. *Saunders on Diabetes Insipidus Cured by Ergot.*—A case of this kind is reported by Dr. E. W. Saunders in the *St. Louis Courier of Medicine.* The patient was a woman, aged fifty-three years, who had suffered from polyuria for two years. She passed from eight to ten quarts of urine daily, of spec. grav. 1004. Under the use of a fluid drachm of extract of ergot three times daily, she rapidly improved, and in three months had made a perfect recovery.

17. *Vauthier on Maize and Maizenic Acid.*—The following are the conclusions drawn by Dr. Vauthier, in a brochure entitled, *Etude sur le Maïs (Zea Maïs) et l'Acide Maïzenique* (*Archives Med. Belges*, August 1880): 1. The action of Zea maize is always favourable in all affections of the bladder, whether recent or chronic. 2. Maizenic acid is the active principle of the stigmata of maize, and it alone contains the therapeutic properties. 3. The diuretic action is not constant; it is met with in cases of acute traumatic cystitis, and in cases of retention, but here the improvement in micturition is due to the recovery of the affected organs, and not directly to the action of the maizenic acid. 4. The best results are observed in uric and phosphatic gravel, in acute cystitis, whether simple or due to gravel, and in mucous or muco-purulent catarrh. 5. In the cases observed by the writer, the ordinary remedies for these affections had already been employed without benefit, while the maize never failed to effect a cure. In connection with the maize, simple and medicated vesical injections were employed. 6. Maizenic acid, moreover, has the power of dissolving calculi by its chemical action; and not only vesical calculi, but also all the other calcareous concretions that are met with in the human system. Hence its use seems indicated in cases of gout and rheumatism, as well as in affections of the urinary organs. The preparations used by the author were the infusion (10 parts of corn-silk to 100 of boiling water, with syrup *ad libitum;* dose, a tablespoonful every two hours), the extract in doses of one and one-half to three grains, and maizenic acid in doses of one-eighth of a grain in pill or mixture.

18. *Guaco as a Remedy for Snake-bites.*—In a recent number of the *Pharmaceutical Journal*, particular attention is drawn to one of the guaco-yielding plants, the *Micania guaco*, a composite plant of South America. The paper referred to is the substance of a letter received at the Royal Gardens, Kew, from a correspondent at La Salada, New Granada, in which the writer gives his personal testimony as to the value of the remedy, and says that it forms the basis of all the preparations of the snake-bite doctors of the district. Notwithstanding that there are several species of snakes in the country whose bite is considered mortal, some killing in a very few hours, it is asserted by the writer of the letter, who has resided in snake-infested regions for many years, that, properly and promptly administered, the guaco is a sure cure for the bite of the most venomous. An infusion or tincture of the leaves is used internally, and hot poultices of the bruised leaves and stem are applied externally.

19. *Chown on a Method of determining the Relative Value of certain Antiseptics.*—This method is founded on a knowledge of the fact that, when blood commences to putrefy, the spectrum of hæmoglobin undergoes a modification; for the two characteristic absorption-bands of oxide of hæmoglobin there is substituted the characteristic band of reduced hæmoglobin. This gradually becomes paler, and finally disappears as the blood becomes more decomposed. The author suggests that a measure of the efficacy of a given disinfectant may be obtained by observing how far it is capable of retarding or arresting putrefaction, as shown by this spectroscopic test. The author details his experiments at considerable length, some of which were performed on living animals. His conclusions are as follows. 1. The spectroscope is capable of furnishing a precise indication of the relative value of certain antiseptics. From the list, however, of such, must be excluded those antiseptics which, like sulphate of zinc, or alum, or tannic acid, act chemically on the blood and decompose the hæmoglobin. So also must be excluded certain other substances, which impart a peculiar colour, or have a spectrum proper to themselves, such as potassic permanganate, sanguinaria, etc. 2. The spectroscope demonstrates that certain substances are, in the proper sense of the word, antizymotic or antiseptic, while others are merely antireduction agents. Some, again, act as inhibitories to both processes. Of these, chloral hydrate is the best, and most perfect example. Among antireduction agents, the most important are, in order, chloral, quinine, and salicin. These substances show their specific action when introduced into the current of the circulation, and, in fact, are more potent and energetic the fresher

the blood is. Of antiseptic substances, or those which check decomposition, the most efficacious are, in order, chloral, arsenious acid, and arseniate of soda. In the same category, but much inferior in strength, are boracic acid, borate of soda, and lupuline.

20. *Verardini on the Depressant Action of Ipecacuanha.*—The author (*Bulletino delle Scienze Mediche*, September 1880) records six cases of acute pneumonia treated by large doses of ipecacuanha. The drug was administered in quantities of two, four, six, and occasionally eight grammes (30, 60, 90, and 120 grains), in 100 grammes of warm water and 40 of syrup being the vehicle used. Three doses were well borne and rarely occasioned any even slight efforts at vomiting. As regards the therapeutical action of the drug in pneumonia and hæmoptysis, the author's conclusions may be summed up as follows. 1. Large doses of ipecacuanha in severe cases of hæmoptysis gave no good results, either as regarded temporary diminution of the quantity of blood expectorated or of the febrile symptoms. On the contrary, its emetic action, which was more clearly marked in such cases, was decidedly prejudicial, inducing great depression and weakness. 2. In simple or double pneumonia, large doses of the drug (four, six or eight grammes) were not only well borne, causing no nausea, but appeared at once to improve the condition of the patient, as shown by diminished temperature and lessened dyspnœa. This improvement was, however, at times accompanied by so much depression as to render a temporary cessation of the remedy advisable. 3. The author is led to hold, as the result of his observations, that ipecacuanha, by virtue of its vascular depressant action, has the power of inducing a condition of parenchymatous anæmia. 4. The emetic action of the drug is not the explanation of the improvement it induces in certain forms of hæmoptysis and pneumonia, inasmuch as in some of the cases this emetic action was decidedly prejudicial, while in others, in which an improvement took place, it did not occur. 5. The depressant action of ipecacuanha on the vessels can be demonstrated on animals experimentally, as the author hopes to show in a forthcoming publication. LITTON FORBES.

MEDICINE.

RECENT PAPERS.

1. BAUMÜLLER.—A Case of Acute Fibrinuria. (Virchow's *Archiv*, Band lxxxii, Heft 2.)
2. DEBOVE.—Muscular Atrophy of Articular Origin. (*Le Progrès Médical*, No. 50, 1880.)
3. KELSCH, M.—On Affections of the Liver in Algeria, and on the Variations of Urea. (*Le Progrès Médical*, Nos. 45, 46, 49, 50, 1880.)
4. DEBOVE and CAPITAN.—Sudden Death in Interstitial Nephritis. (*La France Médicale*, July 28, 1880.)
5. MARCHAND.—The Passage of Pneumonia into Induration. (Virchow's *Archiv*, Band lxxxii.)
6. GRASSET. — On an undescribed Posthemiplegic Phenomenon (Hemiataxy). (*Le Progrès Médical*, No. 46, 1880.)
7. LEPINE.— Paroxysmal Hæmoglobinuria. (*Le Progrès Médical*, No. 47, 1880.)
8. BOUCHARD. — Albuminuria in Typhoid Fever. (*Le Progrès Médical*, No. 47, 1880.)
9. LEVIN.—Hyperæsthesia of the Skin in Dyspepsia. (*Le Progrès Médical*, No. 47, 1880.)
10. DOWNES, E.—Fatal Obstruction arising from Tænia Lumbricoides. (*Lancet*, Dec. 1880, p. 803.)
11. WINTERBOTTOM, A.—Facial Neuralgia depending on Non-Erupted Teeth.—(*British Medical Journal*, Dec. 1880, p. 886.)
12. MACLAREN, R.—The Aspirator as an Aid to Diagnosis in Cases of Obstruction of the Bowels. (*Lancet*, Nov. 1880, p. 762.)
13. RUSSELL, J.—A Case of Calculous Anuria, with *Post Mortem* Examination. (*Medical Times and Gazette*, May 1879, p. 474; and Nov. 1880, p. 616.)
14. ALTHAUS, J.—Cure of Diabetes: Galvanisation of the Medulla. (*Medical Times and Gazette*, Nov. 1880, p. 617.)
15. SMITH, WALTER G.—A Peculiar Case of Albuminuria. (*British Medical Journal*, Nov. 1880, p. 847.)
16. JAGO, F. W. P.—Percussion of the Heart in Chloroform and other Asphyxias. (*British Medical Journal*, Dec. 1880, p. 922.)
17. BRISTOWE, J. S.—The Treatment of Enteric Fever. (*British Medical Journal*, Nov. 1880, p. 841.)
18. MANCINI.—Cerebral Localisation. (*Lo Sperimentale*, Oct. 1880.)
19. DE GIOVANNI.—Arthritis Sicca. (*Annali Universali di Medicina e Chirurgia*, Sept. 1880.)
20. BERNARD, W.—Temperature in Enteric Fever.

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1. *Baumüller on a case of Acute Fibrinuria.*—Dr. Baumüller (Virchow's *Archiv*, Band lxxxii, Heft 2) describes the case of a woman who, after several attacks of hæmaturia, extending over a period of three years, passed white slimy masses, and thereafter improved and recovered. On examining these masses, they were found to consist of casts of the calyces, pelvis, and ureter. Under the microscope the urinary deposit showed numerous pus-corpuscles, and many tiny crystals of triple phosphates, but no epithelium. The coagula consisted of very fine granules in a homogeneous basis substance, with here and there disintegrating red blood-corpuscles. The granules disappeared on treatment with ether. The urine was clear yellow, turbid, neutral; specific gravity of 1014-15; it gave a precipitate on boiling and adding acid, which dissolved in excess. Further examination showed it to contain serum, albumen, and paraglobulin. The coagula were insoluble in water, alcohol, ether, chloroform, alkalies, and concentrated mineral and organic acids, both at ordinary temperatures and on boiling. In caustic potash, concentrated solution of sodium chloride (less in dilute hydrochloric acid), and concentrated acetic acid, there was some swelling to be observed; also after longer action of dilute hydrochloric acid, lime-water, solution of sodium chloride, acetic acid, and alcohol. In alcohol, after two or three days, the swollen masses broke up into ragged shreds. Attempts to digest the masses with gastric juice, obtained from a fistula in a dog, or with artificial gastric juice, failed. He considers the phenomena to have been due to an acute fibrinuria, such as Vogel has described (Virchow's *Handbuch der Specieller Path. und Therapie*, Band vi, 2 Abtheilung, sec. 542), and which is derived from a purulent catarrh of the pelvis of the kidney.

2. *Debove on Muscular Atrophy of Articular Origin.*—M. Debove (*Le Progrès Médical*, No. 50, 1880) has examined the muscles of a patient who had been a long time the subject of chronic generalised rheumatism, with wasting of the muscles. This wasting is ordinarily regarded as the simple consequence of disuse; but M. Debove finds that the wasted muscle presents the characters of muscular atrophy of nervous origin rather than those found in cachectic persons. The muscular fibres are irregularly affected. The affection of the fibres is simple atrophy, while between the fibres the con-

nective tissue is more abundant and denser than normal, and often fatty. In these cases, however, he was unable to find any lesion of the spinal nerve-cells, or of the nerves.

3. *Kelsch on Affections of the Liver in Algeria, and on the Variations of Urea.*—M. Kelsch (*Le Progrès Médical*, Nos. 45, 46, 49, and 50) gives an account of the variations in the excretion in the various forms of liver disease met with in Algeria. The following are his conclusions. 1. The purely congestive affections of the liver do not produce a sensible increase in the production of urea. 2. If the progressive diminution of this substance in suppuration and fibrous hepatitis can be ascribed physiologically to insufficient alimentation, digestion, nutrition, movements, etc., it is at least difficult to disentangle from the incontestable influence of these factors the part which might be played by the suppression of the liver as a uropoietic organ. 3. Finally, it seems, according to certain clinical facts, as if in acute fatty atrophy it is not the formation but the elimination of urea which is diminished; and these facts, the confirmatory results of experiment, acquire a serious value in the discussion on the origin of urea. M. Kelsch ends by saying 'These conclusions have a negative signification as to the uropoietic function of the liver. Nevertheless, while physiology (M. Picard, *Soc. de Biologie*, November 3rd, 1877) and pathology (M. Valmont, *Thèse de Paris*, 1879) have already protested against this new dogma, we are not tempted to arm ourselves without observation against it. The question is not yet ripe, and calls for further investigation before final judgment can be passed. The sole instruction that we would draw from the facts studied by us is, that in clinical medicine we must be careful to use the utmost reserve in applying the variations in the urea excretion to the diagnosis of liver-diseases.'

4. *Debove and Capitan on Sudden Death in Interstitial Nephritis.*—At a meeting of the Société Médicale des Hôpitaux (*La France Médicale*, July 28th, 1880), MM. Debove and Capitan presented a paper, the object of which was to prove that fatal syncope may occur in interstitial nephritis. Both of the sufferers had been in good health up to the time of death, which was not preceded by any morbid phenomena. A third patient had been subject to attacks of suffocation, in one of which he died. There was no trace of valvular lesion in any of these three cases, but the cardiac muscle prevented sclerotic alterations. In discussing the paper, M. Landouzy stated that he had made a necropsy a few days before on a woman who had died suddenly. The brain was normal, but he found considerable hypertrophy of the left ventricle of the heart, and signs of advanced interstitial nephritis. M. Dujardin-Beaumetz drew attention to the fact that medical literature contains a number of cases of very rapid deaths of persons affected with interstitial nephritis, after the hypodermic injection of even very small doses of opium.

5. *Marchand on the Passage of Pneumonia into Induration.*—Dr. F. Marchand (Virchow's *Archiv*, Band lxxxii) has investigated experimentally the conditions which determine the occurrence of interstitial pneumonia. He concludes from these that it is the result of fibrinous pneumonia, and is formed by the development of a vascular connective tissue in the alveoli from the lymphatic elements. There is also an accumulation of epithelium in the alveoli, which in part forms a covering to the new growth, in part undergoes fatty degeneration. He considers the remoter causes to be an earlier pneumonia which has left pleuritic adhesions, bad nutrition, and chills of the surface of the body.

6. *Grasset on an undescribed Posthemiplegic Phenomenon (Hemiataxy).*—Dr. Grasset (*Le Progrès Médical*, No. 46, 1880) describes the case of a man who, after five attacks of aphasia and right-sided paresis, came under his care. In addition to the above conditions, his right hand, which when at rest presented nothing abnormal, was the seat of disordered contractions whenever he attempted any precise movement, such as holding a pencil, to write, picking up a pin, etc. At the *post mortem* examination there was found softening of the upper parts of the corpus striatum (caudate and lenticular nuclei, and internal capsule) and optic thalamus, with a third patch in the inferior portion of the optic thalamus.

7. *Lepine on Paroxysmal Hæmoglobinuria.*—M. Lepine (*Le Progrès Médical*, No. 47) has presented a paper to the Société de Biologie, in which he suggests that paroxysmal hæmoglobinuria is of two kinds: the first wherein the blood-corpuscles are broken up in the blood, the second in which this change takes place in the urinary passages. The latter may occur quite easily, as urine diluted with twice its bulk of water dissolves blood-corpuscles rapidly; and the urine in Bowman's capsules is much diluted, so that any blood-corpuscles separated at the same time would be dissolved.

8. *Bouchard on Albuminuria in Typhoid Fever.*—M. Bouchard (*Le Progrès Médical*, No. 47) brought before the Society of Biology a note on the albuminuria of typhoid fever. The albumen which frequently occurred in the urine of these cases, after being coagulated, when treated anew with heat might retract or not. He distinguished the retractile form of albumen as that derived from inflamed kidneys. Accordingly, the urine which contained this kind of albumen invariably contained bacteria. At a subsequent meeting of the Society, M. Lepine stated that it was sufficient to vary the degree of acidity of the urine to render the albumen at will retractile or non-retractile.

9. *Levin on Hyperæsthesia of the Skin in Dyspepsia.*—M. Levin (*Le Progrès Médical*, No. 47, 1880) says hyperæsthesia has been constantly known as a hysterical phenomenon, but in reality it is dependent on dyspepsia; anæsthesia being the proper symptom of hysteria, and if both concur the patient is both dyspeptic and hysterical.

ROBERT SAUNDBY, M.D.

10. *Downes on Fatal Obstruction arising from Tænia Lumbricoides.* — In the *Lancet*, December 1880, p. 803, Dr. E. Downes reports a case in which Amussat's operation was performed on a patient to whom all other means had failed to give relief. More than two pounds of worms were discharged through the artificial anus, and it seemed that these entozoa had been the sole cause of the obstruction. The patient succumbed after several days.

11. *Winterbottom on Facial Neuralgia dependent upon Non-Erupted Teeth.*—In the *British Medical Journal*, December 1880, p. 886, attention is drawn to obstinate cases of tic excited by badly developed teeth, deep in the alveoli, which were cured, in many cases, by cutting down and extracting the foreign body.

12. *Maclaren on the Aspirator as an Aid to Diagnosis in Cases of Obstruction of the Bowels.*—In the *Lancet*, November 1880, p. 762, Dr. Roderick Maclaren reports a case of a woman, aged 43, with

obstruction of several days' duration, in which ordinary measures failed, and where colotomy seemed to be desirable. The difficulty was to diagnose the seat of the obstruction, as there were no physical symptoms to aid in the diagnosis. An aspirator needle was therefore inserted in the right loin, and with its aid liquid fæces passed, showing that the gut was closed below this point. Right colotomy was successfully performed. [In the *British Medical Journal*, November 1880, p. 803, a case, reported by Mr. Alfred Baker, well illustrates the advantage that might have accrued by the use of the aspirator in diagnosing the proper site for performing colotomy. A man, aged 67, had long suffered from occasional attacks of constipation, evidently due to cancerous disease, but eventually, obstruction being absolute, colotomy was performed in the left loin by Amussat's method, without, however, any relief to the patient, who died the next day. On a *post mortem* examination, it was found that the large intestine was laterally reversed, and that the bowels had been opened above the fæcal accumulation, and so rendered the operation ineffective.—*Rep.*]

13. *Russell on a Case of Calculus Anuria, with Post Mortem Examination.*—In the *Medical Times and Gazette*, May 1879, p. 474, November 1880, p. 616, Dr. James Russell reports a very instructive case in which complete anuria lasted for twenty days. A man, aged 49, of fair general health, had repeatedly suffered from gravel during the previous nine years, and had also repeatedly passed calculi. In August 1878, pain began suddenly in the left loin, and his urine 'stopped all at once'. Vomiting set in from the commencement. The skin acted most profusely; on the twenty-first day an urgent desire to micturate was felt, with severe pain over the bladder. A poultice was applied and the man slept for the first time since his illness. On awaking, urine flowed freely, nine quarts passing in the first twenty-four hours, 'not like urine' said his wife, 'but silvery white, clear, and very bright'. Several calculi passed at the time. Two or three months subsequently he was subject to several slighter attacks of retention, calculi passing upon each occasion. In October 1880, the patient died from asthenia, having been out of health for some time, but with no renal or vesical symptoms. The *post mortem* examination revealed the left kidney nearly atrophied, weighing two ounces and a half, together with an irregular-shaped calculus which occupied its interior, practically closing the opening into the ureter. The right kidney weighed five ounces and three-quarters; a large ovoid stone, one inch and a half by one inch, being firmly impacted in the ureter.

14. *Althaus on the Cure of Diabetes Insipidus by Galvanisation of the Medulla.* — In the *Medical Times and Gazette*, November 1880, p. 617, Dr. Althaus reports an instantaneous cure effected by the application of the current of fifteen cells of Becker-Muirhead's battery to the occiput for six minutes, in a case of diabetes insipidus, which had resisted all other modes of treatment. When seen a week subsequently, the result had been completely successful. Before the galvanism, the average quantity of urine was ninety ounces daily, the next day it fell to thirty ounces; and while, formerly, the patient had incessant calls to pass urine, since the treatment, he passed it thrice a day. Dr. Althaus suggests that Dr. Russell should try the effect of galvanism in the case reported in the LONDON MEDICAL RECORD, November 1880, p. 485.

15. *Smith on a Peculiar Case of Albuminuria.*—In the *British Medical Journal*, November 1880, p. 847, one of those anomalous cases of albuminuria is related by Dr. Walter G. Smith, that are, at the same time, rare and puzzling. A medical man, aged 23, after an attack of scarlatina, suffered from glandular swellings, followed by a monotonous depression and apathy, which lasted several weeks. The urine was markedly acid, dark opaque brown, and exhaled a mawkish odour. The specific gravity was 1065.8. The urine flowed sluggishly, like thin syrup, and possessed some degree of adhesiveness, for it felt sticky between the fingers, and could be drawn out to a certain extent. When allowed to dry, it left a glutinous residue sufficient to fix a glass vessel firmly to the table. With heat it became perfectly solid, even if diluted with an equal volume of water. Under the microscope, a few granular tube-casts and blood-discs were seen. The proportion of urea was not materially above the average. In a short time, under no treatment, the specific gravity fell to 1015, and the albumen almost disappeared, to return, however, in a few days in large quantities. Coincidently with the appearance of the albumen, the temperature rose to 104 deg. Later on, pus appeared in large quantities, and eventually the patient died with uræmic symptoms. The high density, 1065.8, has only been approached in a case noted by Dr. W. Roberts, where it reached 1065.

16. *Jago on Percussion of the Heart in Chloroform and other Asphyxias.*—In the *British Medical Journal*, December 1880, p. 922, Mr. F. W. P. Jago advocates the sharp percussion of the heart's apex in asphyxia due to chloroform, having apparently rescued a patient from death by this procedure. He suggests that the same treatment might be of value in cases of drowning.

17. *Bristowe on the Treatment of Enteric Fever.*—In the *British Medical Journal*, November 1880, p. 841, Dr. Bristowe sums up a very able and instructive paper on the treatment of typhoid in the following words. 'Let me state briefly the treatment to which I should like to be subjected if ever, unfortunately, I should become affected with typhoid fever. I should like to be placed in a cool, well-ventilated room, and covered lightly with bedclothes; to have a skilful and attentive nurse to look after me; to be fed solely with cold milk, unless vomiting should demand the addition to the milk of medicine calculated to allay vomiting. If diarrhœa became troublesome, or ever there was much pain or tenderness in the cæcal region, and in the bowels, I should like to be treated, not with laxatives, but with opium, given either by the mouth or by the rectum. If constipation were present, I should, excepting in the first week, like to have enemata only employed for its relief. In the event of intestinal hæmorrhage coming on, I should like to have ice to suck, or ice-cold fluids to drink, cold compresses to the belly, and cold injections into the bowels; and, though I am sceptical as to their efficacy, I should still choose to have astringents, and more especially lead, given to me at short intervals. If perforation should take place, let me have large and repeated doses of opium. Stimulants I should prefer to be without early in the disease; later, however, and during convalescence, I should like to have them in moderation. As to the cold baths, I would rather not have them; but I would, nevertheless, leave it to my physician to exercise his discretion in the matter. I would leave also for him to decide, according to circumstances, whether alcohol should be administered to me in large quan-

tities. I would prefer not to be treated at a temperance hospital.' R. NEALE, M.D.

18. *Mancini on Cerebral Localisation.*—Dr. Mancini (*Lo Sperimentale*, October 1880), in this paper on cerebral localisation in general, gives details of a special case of aphasia which came under his notice. The patient was aged 43, and up to the moment of the attack had enjoyed perfect health. Suddenly, while at work, he lost the power of speech, which, however, after a copious bleeding, was in part restored. He was admitted to the hospital seven days after this first attack, when his condition was as follows. The temperature in the axilla was 40.5 deg. Cent. (104.9 deg. Fahr.); on the left side of the head, 39.5 deg. Cent. (103.1 deg. Fahr.); on the right, 38.4 deg. Cent. (101.1 deg. Fahr.); pulse 104, with violent action of the carotid. When questioned, he appeared able to understand, but could not articulate. The earliest symptom in the case had been aphasia, but towards the close of life complete coma supervened, with suppression of urine and Cheyne-Stokes breathing. On examining the brain twenty-five hours after death, there was found, within the fissure of Rolando, a long and recent clot, soft in consistence, and weighing about 20 grammes. It extended in a direction towards the base of the brain, entering slightly into its substance. In the centre of this clot a small artery was found, which had ruptured, and whence the hæmorrhage had evidently come. On the removal of the clot, the subjacent brain-substance did not appear to have been in any way altered. No other morbid appearances were found until the lateral ventricles were reached, when another clot was found on the left corpus striatum, of a dark greyish colour, weighing about 10 grammes. The substance of the corpus striatum, on which the clot rested, did not seem to have in any way suffered; hence the absence of certain symptoms during life which might otherwise have been looked for. This latter clot was probably of much earlier date than that in the fissure of Rolando, and so far as the history of the patient went, had never at any time during life caused disturbance. The absence of all signs of inflammation or departure from health in the substance of the convolutions immediately around the fissure of Rolando was certainly remarkable. The author does not hold with Broca, that the centre of speech is confined to the third convolution of the left side, but rather that hæmorrhages causing aphasia are much more frequent on the left side than on the right, owing to the direct origin of the left carotid from the aorta. In this case the difference of temperature was very distinctly marked in life between the two sides of the brain. During life, the diagnosis had been distinctly made out, except so far as the clot on the corpus striatum was concerned.

19. *De Giovanni on Arthritis Sicca.*—Dr. De Giovanni (*Annali Universali di Medicina e Chirurgia*, September 1880) commences this paper by remarking that the uric acid theory of gout will not explain many of the most characteristic and important symptoms of the disease. He enters at considerable length into the pathology and etiology of arthritis sicca, which he distinguishes from gout, and illustrates his views by several clinical histories. His conclusions may be briefly summed up as follows. Arthritis sicca or deformans, whether considered from the point of view of symptomatology or etiology, must be looked on as the manifestation of a lesion of innervation of the spinal cord. The morbid nervous condition which precedes and determines the attack is dependent on abuse of the spinal function. This abuse produces a condition which he cannot as yet particularise anatomically, but which is essentially 'senility of the nervous system'. It is in all probability essentially an alteration of the capillary circulation, with impaired nutrition of the ganglionic cells of the medulla. The muscular, sensorial, functional, and trophic symptoms are all referable to the condition of abnormal exaltation or depression in which the spinal elements are. Arthritis is a distinct disease from gout, with which it has been confounded. Having regard to its pathogenesis, the author would suggest for it the appellation 'Arthritis mellita'. In the early stages the treatment should be prophylactic, and will consist of the removal as far as possible of all causes of spinal excitation, together with a generous diet. As regards therapeutic treatment, he has found cold sulphur baths of service, together with the iodides, salicylates, bismuth, and Dover's powder internally.

LITTON FORBES.

20. *Bernard on Temperature in Enteric Fever.*—A paper on enteric fever was read by Mr. Walter Bernard, of Londonderry, before the Medical Society of the King and Queen's College of Physicians, on the 3rd of November last. He pointed out that the term typhoid was too loosely employed, and predicted that in the future its use would be restricted; and as evidence in favour of this view, referred to the discovery of trichinosis by Zenker, in 1860, to which he might have added the discovery by Mr. Power in respect of an outbreak of disease among the boys of one of the training ships on the Thames. Perhaps the most interesting part of Mr. Bernard's paper is that in which he speaks of temperature. On this point he says, 'it has been proved beyond all doubt that a patient may pass through typhoid without his temperature rising above normal'—a statement which we doubt; but it might be demonstrated by a clinical account of the cases, along with a statement of the *post mortem* appearances; and we trust that those who have seen such cases will now publish them. A complete account of the temperature in enteric fever has yet to be written. The too common practice of taking only morning and evening temperatures is almost valueless, inasmuch as not only are the true maxima and minima not obtained, but the duration of these, the most important facts of all for the purposes of prognosis and treatment, is left wholly out of account. That enteric fever has its evening and its morning is probable enough, but the evening and morning are not necessarily those of a solar or civil day. Were we to state roughly our experience, we should say generally that the high temperatures are found for the most part between noon and midnight, and the low between midnight and noon; but even to this wide rule there are exceptions. As one or two examples which happen to be at hand, we give the following. Case A. C., in which the temperature was taken hourly. In this case, of 19 maxima observations, 13 were after noon and 6 before. Of the 13, 6 were at 10 p.m., 3 at 9 p.m., 1 at 8 p.m., 1 at 6 p.m., 1 at 4 p.m., 1 at 3 p.m., that is to say, on six days the maximum temperature was at 10 p.m., on three at 9 p.m., and so on. Of the 6 maxima which occurred before noon, 2 were at 1 a.m., 2 at 2 a.m., and 2 at 3 a.m. Of the 18 corresponding minima, 15 occurred before noon and 3 after. Of the 15, 8 were at 10 a.m., 3 at noon, 2 at 9 a.m., 1 at 8 a.m., 1 at 11 a.m. Of the 3 minima which occurred after noon, all were at 1 p.m. Twice in the early

days of the illness, the temperature was normal, and one day there was this curious phenomenon—at 9 a.m., the temperature was below normal; at 4 p.m. of the same day it was 104.2; at 7 p.m. 100.4; and at 8 p.m., 103.2. The erroneous conclusions which might have been drawn from this, if the observations had been made at 9 a.m. and at 7 p.m. will be obvious. In case B. P., in which the temperature was taken every two hours from the ninth day of the disease, of 14 minimum observations, 8 occurred before noon and 6 after noon. Of the 8, 7 occurred at 9 a.m. and 1 at 11 a.m. Of the 6 which occurred after noon, 2 were at 2 p.m., 1 was at 5 p.m., 1 at 7 p.m., 1 at 9 p.m., and 1 at 11 p.m. Of 12 maximum observations, 2 occurred before noon and 10 after noon. Of the 2 maxima before noon, 1 was at 1 a.m. and the other at 5 a.m. Of the 10 which occurred after noon, there was 1 at 1 p.m., 3 at 3 p.m., 2 at 7 p.m., 3 at 9 p.m., and 1 at 11 p.m. Many more examples of the same kind might be given if we were treating of the subject at length. We trust, however, enough has been said to show the uselessness of morning and evening observations alone, or of any temperature observation made during the acute stage at longer intervals than two hours.

ALEX. COLLIE.

SURGERY.

RECENT PAPERS.

1. COCA.— Spontaneous Expulsion of a Large Vesical Calculus. (*El Siglo Medico*, Oct. 1880.)

2. MONTES DE OCA.—On a Case of Permanent Paresis caused by the use of Esmarch's Bandage. (*La Independencia Medica*, March 1880.)

3. ISHIGURO.—On the Whale Tendon Ligature as a Substitute for Lister's Catgut Ligature.

4. HAMMOND.— A New Treatment of Neuralgia of the Testis. (*St. Louis Courier of Medicine*, May 1880.)

5. STIRLING, E. C. — Scarlatina after Operations. (*St. George's Hospital Reports*, vol. x.)

6. COUPER, J. — Case of Nephrectomy by Lumbar Section. (*Medical Times and Gazette*, Nov. 1880, p. 588.)

7. GOULD, A. P.— Influence of Varicocele upon the Testis. (*British Medical Journal*, Dec. 1880, p. 885.)

8. HULKE, J. W.—Fæcal Vomiting, with Passage of Stools and Flatus *per Anum* in Strangulated Hernia. (*British Medical Journal*, Nov. 1880, p. 846.)

9. WILLIAMS, R.—An Improved Method for Excising the Wrist-Joint. (*Lancet*, Dec. 1880, p. 932.)

10. HEATH, C.—A Case, Two Years after Removal, of Epithelioma of Mouth and Lower Jaw. (*Lancet*, Nov. 1880, p. 812.)

11. STURGE, W. A.—Stretching the Facial Nerve for Spasm of the Facial Muscles. (*British Medical Journal*, Nov. 1880, p. 810.)

12. SPANTON, W. D.—The Immediate Cure of Inguinal Hernia. (*British Medical Journal*, Dec. 1880, p. 920.)

13. GREENE, W. W.—Litholapaxy. (*Boston Medical and Surgical Journal.*)

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1. *Coca on the Spontaneous Expulsion of a large Vesical Calculus.*—Dr. Coca (*El Siglo Medico*, Oct. 1880) narrates in detail a case of expulsion of a large vesical calculus. The patient, a woman, aged 60, had suffered for more than a year from symptoms of stone; when, on one occasion, during micturition, and without any excessive pain or straining, an urate of lime calculus was passed. It was about the size of a hen's egg, and weighed 34.10 grammes (528 grains). The patient recovered rapidly without any bad symptoms.

2. *Montes de Oca on Permanent Paresis.*—Dr. Montes de Oca (*La Independencia Medica*, March 1880) records a case in which an Esmarch's bandage was applied to the forearm during the performance of a minor operation on the hand. The bandage remained *in situ* about twenty minutes, but, on its removal, the whole of the extensors and flexors of the forearm were found to be paralysed. Every means had been tried, but without effect, to remove this condition. The muscles still responded to faradisation. LITTON FORBES, M.D.

3. *Ishiguro on Whale-Tendon Ligature.* — Dr. Ishiguro, chief surgeon of the Imperial Japanese Army, writes that the mode of preparing the ligature is as follows.—'First, a whale's tendon is dissected by the points of needles, and teased out until the fibres look very like those of hemp. Secondly, the longest and finest fibres among them are selected, and they are then spun together as ordinary silk thread.' The ligature so made was subjected to the following tests. 'First, a weight of four pounds four ounces was suspended on a cord of one metre in length and 0.18 gramme in weight, but it was not broken.' 'Second, the ligature was boiled for seventy-two hours, and then kept at blood-heat for five days, but only showed slight expansion or softening, without the least dissolution or loss of strength.' 'Third, the ligature was soaked in a solution of pepsin (two drachms), dilute hydrochloric acid (one drachm), and water (five ounces), and then kept at the temperature of the body for twenty hours, but showed not the least sign of dissolution.' 'Fourth, it was tested likewise by soaking in acetic acid and lactic acid (both in a diluted state) and also in liquor potassæ, in all of which cases the strength of the ligature was proved by like results.' 'Fifth, the first actual trial was made upon a patient in whom excision of the femur was necessary. In this case one of the ends of the ligature was cut off close to the knot, while the other was left hanging out of the wound. After the lapse of seven days an examination was made, and it was found that not the least trace of the ligature was to be detected Subsequent trials proved that three days after the application were quite sufficient for the full absorption of this ligature.' Trials were then made as to the rapidity of its absorption, for 'a too speedy absorption would cause secondary hæmorrhage'. In the amputation of a leg the ligature was applied, and there was not the least manifestation of secondary hæmorrhage; a like success also followed in the ligature of the femoral artery. In conclusion, Dr. Ishiguro says the merits of the ligature are the following. 'First, it is the cheapest. Second, it is readily conveyed and preserved. Third, it is easily procurable. Taking these three points into consideration, and bearing in mind the strength which the ligature naturally possesses, and which can be still more increased by soaking it in carbolic oil, it may be concluded that it can be relied on to answer every purpose of a ligature and suture.' Dr. E. Otis, who communicates this to the *Boston Medical and Surgical Journal*, says that he is informed by Dr. Leland that a piece of the ligature six feet in length is worth from twelve to fifteen cents.

4. *Hammond on a New Treatment of Neuralgia of the Testis.*—Professor Wm. A. Hammond contributes an article to the *St. Louis Courier of Medicine*, May 1880, on neuralgia of the testis, in which he relates the histories of two cases, which were successfully treated by a method not hitherto employed in this affection. The first patient, aged 47, had suf-

fered more or less severely for over fifteen months. He admitted that the affection was originally, in all probability, induced by excessive venereal indulgence, but insisted that since the commencement of the disease he had been extremely temperate in this direction. There was no evidence of syphilis. The pain was of a sharp, lancinating character, not confined to the testicle, but extending up the cord as high as the external abdominal ring. The cremaster muscle was, during the continuance of the paroxysms, the subject of strong spasm. Walking increased the pain, and sometimes brought on a seizure. The patient had tried all sorts of treatment without relief, and Dr. Hammond had already given an unfavourable prognosis, when the idea struck him that possibly strong pressure applied to the spermatic cord, so as to compress the nerves, might arrest the spasms. He extemporised a compressor out of an ordinary test-tube holder and a strong India-rubber band, and applied it while the patient was suffering from a severe paroxysm, so as to compress the cord as high up as possible. So far from adding to the pain he was suffering, the immediate effect was a decided amelioration; but after a few minutes the pain began to increase, and soon became more intense than before. The pressure was then increased by squeezing the blades of the instrument together with the fingers, and the pain stopped at once. The instrument was kept applied for fifteen minutes longer. Six hours afterwards there had been no return of the pain, and to the present date the patient has remained entirely free from all pain. Sensation, which was destroyed by the pressure, has returned to the scrotum and testicle, and there are normal erections and sexual desires. The other patient, aged 38, had suffered from the neuralgia for three months, and at the time he came under observation his suffering was particularly acute. In this case there was no reason for suspecting excessive sexual indulgence or syphilitic infection as the cause; apparently it was due to exposure to cold. As in the other case, the right testicle was the seat of the disease. Walking, sitting, or standing aggravated the suffering, and only by lying down on his back did he obtain any marked alleviation. Since the commencement of the malady, venereal desires had almost entirely ceased, and erections such as those caused at night by lying on the back, or by distention of the bladder, added greatly to the suffering. Pressure was applied to the cord by means of an apparatus similar to a lemon-squeezer, but so arranged that the blades could be brought closer together or separated by means of a screw passing through them. In this way the pressure could be more exactly adjusted than by the elastic bands used in the previous case, and could, moreover, be rendered much greater, as occasion might require. The cord was compressed strongly at first; there was some little local pain, chiefly in the skin of the scrotum, but the pain in the testicle was immediately arrested. After five minutes had elapsed, the blades were separated so as to allow the circulation to be resumed, but in five minutes they were tightened again; after another five minutes of strong pressure they were adjusted, so as to permit the circulation to go on, but yet exert considerable force upon the nerves; and while thus arranged the patient fell asleep, the first undisturbed nap that he had had since the beginning of the disease. For several days afterwards the testicle seemed to be numb, but the insensibility was evidently gradually disappearing. To be effectual in relieving the pain of a neuralgic testis, Dr. Hammond believes that the pressure must be strong enough to break up the axis-cylinder of the nerves. If it be less than this, the pain will be aggravated; doubtless, in time, the nerve is restored to a state of integrity, but how long a period is required for this purpose cannot yet be determined.

5. *Stirling on Scarlatina after Operations.*—To the recently published (tenth) volume of *St. George's Hospital Reports*, Mr. Edward C. Stirling contributes a very interesting paper on certain eruptions of the skin which occur after recent operations and injuries, in which he tabulates sixty-three cases of scarlatina, of which forty-nine showed the symptoms of the disease within three days after the operation, and all within a week. He asserts that 'the rash and febrile symptoms which occur frequently as the immediate sequel of an operation are often those of scarlet fever; that the fever is, in some way as yet undetermined, dependent on the presence of the wound; and that when scarlet fever occurs under these circumstances it undergoes certain deviations from the normal type of this disease'. Among these deviations he mentions the much shorter duration and frequent entire absence of the premonitory fever, the simultaneous appearance of the rash over the whole or its first appearing on the limbs, and the frequent absence of sore-throat. The disease is most often met with in young subjects, its mortality is about the same as those of ordinary scarlet fever, and often the condition of the wound is entirely unaffected. The disease seems to be more often associated with the comparatively slight than the severer operations. Other eruptive fevers are not likely to develop themselves; indeed, it is stated that, 'as far as we know at present, scarlet fever stands alone amongst the eruptive fevers in its liability to attack the subjects of recent wounds'. Cases are also reported of non-scarlatinal rashes, and urticarial, papular, and vesicular eruptions, much fewer in number and believed to depend upon disturbed vaso-motor actions, consequent upon reflex nervous irritation, or perhaps the absorption of irritant products from the surface of the wound. Herpes is believed to be 'associated with much more profound constitutional disturbance than either urticaria or erythema'.

6. *Couper on a Case of Nephrectomy by Lumbar Section.*—In the *Medical Times and Gazette*, Nov. 1880, p. 588, Mr. John Couper contributes another to the already numerous cases in which the kidney was successfully removed. In this case, the right kidney was converted into a large purulent cyst, which was first emptied by an exploratory incision, and then it was decided to extirpate the cyst itself. The recovery was uninterrupted, although the peritoneal cavity had been opened, and some of the pus had contaminated the inner surface of the peritoneum. The girl left her bed thirty-six days after the operation, and is now rosy and in good health.

7. *Gould on the Influence of Varicocele upon the Testis.*—A very interesting communication, based upon two cases presented at the meeting, was made to the Clinical Society by Mr. Pearce Gould (*Brit. Medical Journal*, December 1880, p. 885) upon this disputed subject. Both men, aged 18 and 17 respectively, were well-made and robust, but in each there was a large left varicocele, with the testicle on the same side much smaller than its fellow, but retaining its natural firmness, outline, and testicular sense. In neither case was there any pain or disturbance to be traced to the varicocele. Mr. Gould stated he had never met with a left testicle larger

than the right—its normal relation—when there was a large varicocele on the same side ; and that there were strong reasons for thinking that varicocele might, in many cases, produce wasting of the gland, or rather arrest of growth, rather than atrophy. [In the LONDON MEDICAL RECORD, July 1880, p. 280, will be found a reference to a clinical lecture by Dr. Ogilvie Will, which, among other points, discusses the different opinions formed by Sir James Paget, Mr. Curling, and others, as to the effects which varicocele exerts upon the testicle.—*Rep.*]

8. *Hulke on Fæcal Vomiting, with Passage of Stools and Flatus 'per Anum', in Strangulated Hernia.*—In the *British Medical Journal*, November 1880, p. 846, Mr. Hulke reports, in detail, the history of a man who was admitted with a large strangulated scrotal hernia, that had existed for thirty hours. Taxis having failed, herniotomy was performed, and the sac opened. Twenty-four hours or more afterwards, he began to vomit. What he threw up was distinctly fæculent, and he also passed flatus by the anus. The wound was re-opened, the sac was found empty, but the reduced omentum lay in a mass against the ring; this was pulled out and cut away. For nine days hiccough and fæcal vomiting, with flatus and loose fæcal discharges *per anum*, continued more or less, and then the unnatural symptoms gradually subsided, and the man left the hospital cured. The explanation that Mr. Hulke offers is the following. 'It is well known that, in omental herniæ of large size, the protruding omentum drags after it the transverse colon, which, in the *post mortem* room, is often seen pulled down from its normal relations, acutely bent in a V-like form, the apex at the angle lying at the abdominal opening of the rupture. Such an acute bend might offer a nearly complete hindrance to the passage of the contents of the gut, which would show itself by the ordinary signs of intestinal obstruction. It is not impossible that such an acute bend of the transverse colon may have been present here. The reduction of the omentum at the operation, by lessening the drag upon the colon, was followed by remission of the symptoms; but still, weighted by the mass of the omentum, the acute bend of the gut did not wholly disappear; the colon did not rise to its normal position, and its thorough perviousness was not restored. But when the omentum was cut off, the colon gradually rose, became again quite pervious, and all evidence of obstruction ceased. The sequel showed that it would have been preferable to cut off the omentum at first; but its natural condition, excepting a slight degree of congestion, was judged to warrant its replacement'.

9. *Williams on an Improved Method for Excising the Wrist-Joint.*—In the *Lancet*, December 1880, p. 932, Mr. Rogers Williams illustrates with a diagram a method by which the wrist-joint may be excised with little injury to the tendons; the dorsal incision being altogether dispensed with, while the knife passes along the back of the wrist near its inner border, being entered over the tendon of the extensor carpi ulnaris, and carried downwards between the head and styloid process of the ulna, over the apex of the cuneiform to the middle of the fifth metacarpal bone. By this incision the joint is easily reached and removed, excepting the trapezium and pisiform bones, with the unciform process, all of which should be left, unless diseased.

10. *Heath on a Case Two Years after Extensive Epithelioma had been removed from the Floor of the Mouth and Lower Jaw.*—In the *Lancet*, November 1880, p. 812, a very encouraging case is reported by Mr. Christopher Heath, showing how a very extensive mass of ulcerating epithelioma may be successfully removed. In Mr. Heath's case, the disease involved the alveolar process as far back as the last molar tooth, while forwards it extended to the middle line. It spread outwards to the adjacent part of the cheek, but involved only the mucous membrane, not the deeper structures. Inwards it reached along the floor of the mouth as far as the mid line. The tongue was not involved. A month after the operation, the patient left for Eastbourne, whence he returned in another month with the mouth quite healed. When last seen, nearly two years subsequent to the operation, the mouth was perfectly sound, the gap caused by excising part of the jaw being filled by firm dense cicatrix, covered with healthy mucous membrane, and the right side of the jaw was drawn inwards by muscular action, as is usual in cases of division of the mandibles.

11. *Sturge on Stretching the Facial Nerve in Spasm of the Facial Muscles.*—In the *British Medical Journal*, November 1880, page 810, Dr. Allen Sturge reports a successful case of this operation, the fifth that has been recorded, and the first in England. The patient was a lady, aged 72, who had long suffered from spasm of all the muscles supplied by the right facial nerve, and on which treatment had been useless. Mr. Godlee exposed the nerve as it issued from the stylo-mastoid foramen, raised it on a hook, and drew upon it with moderate force. After a few pulls, the muscles on the right side were paralysed, and remained so for two months. When seen, three months after the operation, the face, at rest, was nearly symmetrical on the two sides; but there was still a good deal of deficiency of movement in the muscles of the right side.

12. *Spanton on the Immediate Cure of Inguinal Hernia.*—In the *British Medical Journal*, December 1880, p. 920, Mr. W. Dunnett Spanton describes and illustrates his new plan of operating for the radical cure of inguinal hernia which, apparently, bids fair to become the operation for such cases. The mode of procedure is most simple. An incision is made in the skin of the scrotum large enough to admit easily the forefinger over the fundus of the hernial sac; the fascia and hernial sac are then invaginated up to the internal abdominal ring. An instrument shaped like a corkscrew is next thrust through the skin of the groin so as to transfix the aponeurosis of the external oblique muscle at a point somewhat above that at which it is intended to pass through the conjoined tendon. The screw is now given a half turn to the right if a right inguinal, and a whole turn to the left if it be a left hernia, and made to pierce subcutaneously the conjoined tendon of the internal oblique and transversalis muscles as high up as can be safely reached, the left forefinger carefully guarding the point, so as to avoid wounding the vessels or peritoneum. The internal ring is now practically closed. The screw is again turned, passing through the invaginated tissues, and then again through the external pillar, then across to the internal pillar, so as to bring the point out at the wound in the scrotum. The handle should lie flat on the abdomen and the point be protected by a pad. After a week or more, there will be a certain amount of inflammatory action, with more or less discharge from the wounds, the amount of induration being a guide to the removal of the instrument, which is easily effected. A week is generally suffi-

cient. In thirteen cases, eleven were completely cured, two greatly benefited. R. NEALE, M.D.

13. *Greene on Litholapaxy.*—The following is an epitome of ten cases of litholapaxy published by Dr. W. W. Greene in the *Boston Medical and Surgical Journal.* Case I. Male, aged 52. Time, 1 hour 50 minutes. Weight, 250 grains. Recovered.—Case II. Male, aged 61. Time, 2 hours 20 minutes. Weight, 347 grains. A stricture required divulsion. Recovered.—Case III. Male, aged 67. Time, 2 hours 42 minutes. Weight, 658 grains. Nearly died from abscess in prostate; ultimately recovered. —Case IV. Female, aged 38. Time, 32 minutes. Weight, 1015 grains. A case of multiple calculi. Recovered.—Case V. Male, aged 71. Time, 2 hours 12 minutes. Weight, 189 grains. Much shock, recovered in three months and a half.—Case VI. Male, aged 75. Time, 2 hours 57 minutes. Weight, 447 grains. A stricture divulsed. Shock and fever very severe. Ultimately recovered. — Case VII. Male, aged 74. Time, 1 hour 15 minutes. Weight, 425 grains. Recovered fairly.—Case VIII. Male, aged 50. Time, 1 hour 6 minutes. Weight, 708 grains. A stricture required internal urethrotomy. Recovered.—Case IX. Male, aged 57. Time, 1 hour 39 minutes. Weight not given. Recovered.—Case X. 'This was not a case of litholapaxy.' Owing to the *contractured* bladder, the stone could not be seized; the patient died next day. Dr. Bigelow's lithotrite was only used in four cases; his tubes, varying in size from No. 22 to 36 (French scale), and aspirator, were used in all. [As Dr. Bigelow's suggestions in reference to the operation of lithotrity are still under consideration, the publication of lists such as the above is very desirable. It would, however, add much to their value, if surgeons in reporting gave the dates of operation and recovery, and specified in every instance the nature of the calculus removed. Dr. Greene does not give dates, nor does he mention the composition of the stones. As Case IV is that of a female, it should not be included, and the only fatal case out of the ten Dr. Greene says is *not* a case of litholapaxy. This reduces the list to eight cases, well worthy of record as treated according to the principle laid down by Dr. Bigelow, although not with his instruments.—*Rep.*] G. BUCKSTONE BROWNE.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. ENGELMANN, G. T.—The Dangers Incident to the Simplest Uterine Manipulations and Operations. (*Transactions of the Missouri State Medical Society.*)

2. ENGELMANN.—The Instinctive or Natural and Physiological Position of Woman in Labour.

3. KILNER.—The Effects of the Induced Current in Parturition. (*Lancet*, Jan. 1, 1881.)

4. MANGIAGALLI.—Labour in Brow-Presentation. (*Annali di Ostetricia, Ginecologiale Pediatria*, Dec. 1880.)

5. PAJOT.—On Narrowness of the Uterine Orifices in Relation to Dysmenorrhœa and Sterility. (*Annales de Gynécologie*, Dec. 1880.)

6. PATENKO.—On the Development of Fibrous Bodies in the Ovaries. (*Centralblatt für Gynäcologie*, Sept. 11, 1880.)

7. PATENKO.—On the Terminal Distribution of the Nerves in the Uterine Mucous Membrane. (*Ibid.*, Sept. 11, 1880.)

8. PORAK.—Reciprocal Influence of Gestation and the Diseases of the Heart. (*Thèse de Paris*, 1880.)

9. REED.—The Use of Anæsthethics in Labour. (*Detroit Lancet*, Dec. 1880.)

10. RODGER.—Hydrops Amnii. (*Canada Medical and Surgical Journal*, Nov. 1880.)

11. TAYLOR.—On a Case of Pregnancy Undisturbed by Manipulation and the Introduction of Instruments into the Uterus. (*Transactions of the New York Academy of Medicine*, Oct. 28, 1880.)

12. TAYLOR.—On a Case of Inversion of the Uterus in a Virgin. (*Ibid.*)

13. TATE.—On Rupture of the Perinæum. (*Transactions of the Cincinnati Acad. of Med.*, 1880.)

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2. *Engelmann on the Instinctive and Natural Position of Woman in Labour.*—Dr. Engelmann, in an exhaustive paper on the subject, states that, when he has watched women during the last expulsive pains, he has observed them raise themselves in bed into a semi-recumbent position on the hands or elbows. This struck him most forcibly when he observed this motion in a young primipara, who had gone through the earlier stages of labour bravely; and although partially under the influence of chloroform, when, with the last severe pains, the head of the child would advance and then again recede, finally, in her agony, raised herself up into a semi-recumbent position, and with the next pain the child was born. Other women assume the semi-recumbent position by clinging to the neck of the husband, or an assistant who may be seated by the bedside. The author regards the semi-recumbent, or squatting, position as the natural and physiological posture for delivery.

4. *Pajot on Narrowness of the Uterine Orifices in relation to Dysmenorrhœa and Sterility.*—In an interesting article on stenosis of the external os uteri, Professor Pajot relates three cases in which an extremely small os uteri was present, with the usual dysmenorrhœa and sterility in young married women. In all three cases the os uteri was gradually dilated by means of an ordinary uterine dilator. Pregnancy ensued in all three cases, although in the first case the os uteri was invisible to the naked eye, and almost invisible in the second case. Professor Pajot is opposed to incision of the external os uteri as a means of removing the stenosis, and prefers gradual dilatation. He draws the following conclusions. In the same way that any obstacle to the facile flow of menstrual blood may cause dysmenorrhœa, stenosis of the external orifice may cause it. When stenosis appears to be the cause, enlargement of the orifice is indispensable. The opening of the uterine orifices by cutting instruments exposes the patient to serious dangers—septicæmia, pelvic peritonitis, and metritis, and even to death. Sponge and laminaria tents also frequently lead to serious complications, such as perimetritis and septicæmia. Dilatation, carried out by means of graduated dilators, for several minutes at each sitting, is, in the absence of proof to the contrary, absolutely free from danger. In cases of sterility depending on stenosis, it is only necessary to dilate the external os uteri; and where this has to be done, transverse dilatation appears to be more favourable to subsequent impregnation than circular dilatation.

6. *Patenko on the Development of Fibrous Bodies in the Ovaries.*—Dr. Patenko provisionally draws the following conclusions from researches which he is at present making. 1. Ovarian corpora fibrosa unquestionably develop from corpora lutea. They may, however, also arise from follicles of incomplete maturity. During the progress of this development, the

primary follicles are, as a rule, destroyed by colloid metamorphosis. 2. Corpora fibrosa occur in two varieties : (*a*) fibrous bodies, containing an internal cavity ; (*b*) solid fibrous bodies, without any trace of such cavities. 3. Both kinds lack the capability of independent growth. 4. Fibrous tumours, which actually grow from the ovaries, may attain the size of a hen's egg, or at the utmost that of a goose's egg. In other words, their size never exceeds the dimensions which the ovary itself may reach under certain conditions. 5. In such cases, the fibrous tumours are formed by a 'flowing together' of the follicles and vessels of the ovaries. Both follicles and vessels are found to be in a condition of sclerosis. 6. The ovarian origin of the larger fibromata of the ovary is a matter of doubt.

7. *Patenko on the Terminal Distribution of the Nerves in the Uterine Mucous Membrane.*—Patenko has examined the freshly extirpated uteri of five women who had been operated on by Schroeder for cancer. The disease did not extend beyond the internatas. The microscopical appearance of the uterine mucous membrane was perfectly normal. Chloride of gold and osmic acid, in solutions of 0.01 to 0.5 per cent., were used. Portions of the specimens were subsequently placed in 96 per cent. alcohol and used for thin sections. Other preparations were obtained by tearing small portions of the tissue in the solution. He was successful in isolating some of the uterine glands, and a beautiful reticulum of delicate non-medullated nerve fibres was seen in connection with the membrana propria. This network was situated above the external surface of the glands, and minute filaments were seen to proceed from it into the interior of the glands. These extremely delicate fibres were found between the epithelioid cells of the membrana propria or in the glandular epithelial cells. Their ultimate termination in the latter was not positively ascertained. The nodular points of the superficial reticulum frequently showed small nerve-cells. The author believes that this network takes its origin from the nerve fibres which course in the muscular substance of the uterus, and, accompanied by some intermuscular connective tissue, proceed to the boundary line of the mucous membrane,

8. *Porak on the Reciprocal Influence of Gestation and Disease of the Heart.*—The author accepts the theory of augmentation of the amount of blood during gestation, which appears to him to be proved, not only by certain troubles which might be attributed to a perturbed action of the nervous system, but especially by the sphygmographical researches of Marey, Fancourt Barnes, Lorain, Mahomed, and others. The excessive tension which results from the increased quantity of blood necessitates an augmented contraction of the cardiac muscle, which may lead to hypertrophy of the whole organ. The augmentation of the mass of the blood is the most important point, because each vessel reacts against the excessive distension which results, and the heart most of all. Hence a disposition to dilatation, which is counterbalanced by a disposition to hypertrophy. As regards the influence of pregnancy on an existing endometritis, M. Porak is of opinion that the gestation acts by precipitating the course of cardiac diseases, and predisposes in a special manner to pulmonary complications and embolism.

9. *Reed on the use of Anæsthetics in Labour.*—Dr. Reed says that, instead of the wild excitement, horrified by the possibilities of impending dissolution, by a proper and careful etherisation of the patient, she passes into a quiet and peaceful slumber while the labouring uterus continues its course uninterrupted. The soft parts are aided in their relaxation, while a strong barrier is placed against that dreaded and oftentimes fatal calamity, puerperal convulsions. Thus the labour proceeds quietly and peacefully to a happy end, and the wild shrieks and sobs of despair, so common on these occasions, are silenced by a peaceful rest in the arms of Morpheus. As regards the effect on the fœtus, Dr. Reed states that the newborn child presents its usual appearance, its cries are neither weaker nor heard less promptly, nor does its viability appear to be in any way injured. Dr. Reed does not commence the use of the anæsthetic before the os is dilated to, at least, the size of half-a-crown, before which the woman will bear her pains with but little complaint. He has found that the danger of delay in labour is much more liable to occur from the use of an anæsthetic too early in labour, than from the too free use of it after labour has advanced. It may be laid down as a rule before commencing the use of an anæsthetic to give a dose or two of the fluid extract of ergot, which will not only facilitate the uterine contractions, but act as a safeguard against any tendency to hæmorrhage. He has lately used quinine in from three to five grain doses, or the two combined, and has obtained invariably good results. Dr. Reed prefers the following mixture as the best and safest anæsthetic to use : Chloroform, ʒii ; sulphuric æther, ʒii ; absolute alcohol, ʒi.

11. *Taylor on a Case of Pregnancy undisturbed by Manipulation.*—Dr. Taylor related a case in which the patient had one menstrual period after marriage, and subsequent to that had a slightly coloured discharge. Occasionally what seemed to be membranous remains passed off, and, after a few days, she flowed very freely. During the treatment to which she had been subjected, the case having been regarded as one of endometritis, the uterine sound had been introduced, sponge-tents had been used, and various applications had been made to the cervix ; yet abortion did not occur, although it was afterwards established that pregnancy must have existed at the time.

12. *Taylor on Inversion of the Uterus in a Virgin.*—Dr. Taylor reported a case of inversion of the uterus, occurring in a patient aged forty years, whom he saw with Dr. Polk. There was not any evidence whatever that the woman had ever been impregnated. The uterus was about the size of a large orange. The inversion was complete. Dr. Taylor believed that the inversion had been gradual in its development, and that it began in the cervix.

13. *Tate on Rupture of the Perinæum.*—Dr. Tate states that, in his department of the City Hospital, out of some 200 women who had been delivered, there had been rupture of the perinæum in 75 cases, or about 37 per cent. FANCOURT BARNES, M.D.

DISEASES OF THE THROAT.

RECENT PAPERS.

1. BENSCH.—A Case of Paralytic Dilatation of the Trachea. (*Monatsschrift für Ohrenheilkunde*, Band xiv, Heft 6, 1880.)

2. KOERTE.—Report of Cases of Tracheotomy for Diphtheria in Children, Tumours of the Larynx, and Stenosis of the Larynx and Trachea, occurring in the Surgical Department of the Bethanien Hospital, Berlin,

during the year 1878. (*Archiv für Klinische Chirurgie*, Band xxv, Heft 4, 1880.)

3. COHEN.—External Incisions for the Removal of Benign Intralaryngeal Neoplasms. (*Archives of Laryngology*, vol. i, No. 2.)

4. FRITSCHE.—Aphonia Spastica. (*Berliner Klinische Wochenschrift*, Nos. 15 and 16, 1880.)

5. GERHARDT.—Functional Spasm of the Larynx. (*Archives of Laryngology*, vol. i, No. 2.)

6. LIDÉN.—A Case of Tying the Left Common Carotid after Tonsilotomy. (*Hygeia*, April 1880.)

7. SPAGNOLO.—Obstinate Hæmorrhage after Partial Excision of the Uvula. (*L'Union Médicale d'Orient*, 24, 1880.)

8. HEINZE.—A Case of Angioma of the Larynx. (*Archives of Laryngology*, vol. i, No. 2.)

9. MACKENZIE, HUNTER.—Cases from the Throat Department of the Western Infirmary, Glasgow, with Remarks. (*Lancet*, August 28th, 1880.)

10. POORE.—Laryngeal Paralysis. Alterations in Phonation and Articulation. Clinical Lecture. (*Ibid.*)

11. SCHAEFFER.—A new simple Laryngoscopic Lamp. (*Deutsche Medicinische Wochenschrift*, Sept. 25th, 1880.)

12. ADAMS.—A new form of Electric Laryngoscope. (*Rocky Mountains Medical Review*, September 1880.)

13. WOAKES.—A new Instrument for the Introduction of Stitches in Operations for Cleft Palate, etc. (*Lancet*, July 24th, 1880.)

14. TYSON.—Tracheotomy in Croup. (*British Medical Journal*, September 18th, 1880.)

15. WOLFF.—Operation for Cleft Palate. (*Archiv für Klinische Chirurgie*, Band xxv, Heft 4, 1880.)

16. ROBINSON.—The Therapeutic Value of Rest in the Treatment of Laryngeal Disease. (*Archives of Laryngology*, September 1880.)

17. KRISHABER.—Spasms of the Glottis in Locomotor Ataxy (Congress of Laryngology at Milan, in September 1880. *Annales des Maladies de l'Oreille, du Larynx, etc.*, November 1880.)

18. DE LA SOTA.—Pathological Action of Tobacco upon the Throat. (*Ibid.*)

19. SCHMIDT.—Tubercular Laryngitis. (*Ibid.*)

20. HEINZE.—A Rare Form of Syphilitic Stenosis of the Larynx. (*Ibid.*)

21. ROSBACH.—A New Method of Anæsthetising the Larynx. (*Ibid.*)

22. BARÉTRY.—On Stridulous Laryngitis. (*Ibid.*)

23. MASSEI.—Affections of the Ventricles of Morgagni. (*Ibid.*)

24. MASSUCCI.—Nasal Douches of Compressed Air. (*Ibid.*)

25. LABUS.—Relaxation of the Uvula. (*Ibid.*)

26. CERVESATO.—Cysts of the Larynx. (*Ibid.*)

27. LŒWENBERG.—Myxosarcoma of the Pharynx in a Child Five Years Old. (*Ibid.*)

28. ELSBERG.—Simple Erosions of the Larynx, due to Violent and Obstinate Cough. (*Ibid.*)

29. BUCHANAN, GEORGE.—On Tracheotomy in Croup and Diphtheria. (*British Medical Journal*, April 1880, p. 554.)

30. RIESENFELD, B.—Treatment of Chronic Catarrh of the Pharynx. (*Zeitschrift für Practische Medizin.*, and *Annales des Maladies de l'Oreille, du Larynx*, etc. June 1880.)

31. MARTEL.—Contribution to the Study of Simulated Aphonia. (*Annales des Maladies de l'Oreille, du Larynx*, etc., June 1880.)

32. MOURE, E. J.—Papillary Tumours of the Larynx in a Child aged 5 years, simulating Tracheo-bronchial Adenopathy. (*Ibid.*)

33. KOCH.—On Ignipuncture in Affections of the Aërial Primæ Viæ. (*Annales des Maladies de l'Oreille, du Larynx, etc.*, Nov. 1880.)

34. WINDELSCHMIDT.—Foreign Bodies in the Air-Passages. (*Monatsschrift für Ohrenheilk., etc.*, July 1880.)

35. VOLTOLINI, R.—Rare Form of Disturbance of Co-ordination of the Laryngeal Muscles (*Chorea Laryngis.*) (*Ibia.*)

1. *Bensch on a Case of Paralytic Dilatation of the Trachea.*—This case is reported in the *Monatsschrift für Ohrenheilkunde*, Band xiv, Heft 6, 1880. A man, 57 years old, had for three-and-a-half months suffered with cough, hoarseness, and shortness of breath. Suddenly he experienced a difficulty in swallowing fluids, and at the same time a swelling appeared in the neck, and the dyspnœa increased. The swelling, on long speaking, coughing, or pressing the abdomen, projected forwards, and became of the size of a fist. It was of an irregular shape, tympanitic on percussion, and gave an impulse on coughing. On palpation, when the head was extended and during quiet respiration, the tumour disappeared, and only a soft elastic cylindrical swelling could be then felt to the right of the trachea. The trachea deviated considerably to the left side, so that only a small portion of its segment could be felt in the jugulum, whilst its left edge lay under the anterior border of the sterno-mastoid. No opening in the air-tube could be detected. With the exception of some bronchitis, the chest was normal. On laryngoscopic examination, paralysis of the right vocal cord was discovered. Dr. Bensch concluded that the swelling, which was evidently not connected with the lungs or the jugular vein, nor due to an escape of air into the cellular tissue, was the result of paralysis and dilatation of the right half of the posterior wall of the trachea. He believes that the trachea, in common with the right half of the larynx, having become paralysed, yielded to the violent expiratory efforts caused by the bronchitis and the paralysis of the vocal cord. The cause of the paralysis he thinks a matter of conjecture.

2. *Koerte on Cases of Tracheotomy for Diphtheria in Children, Tumours of the Larynx, and Stenosis of the Larynx and Trachea.*—Dr. Koerte reports in the *Archiv für Klinische Chirurgie*, Band xxv, Heft 4, that no fewer than 149 tracheotomies for diphtheria (membranous croup) were performed in the Bethanien Hospital during the epidemic of diphtheria in Berlin in the year 1878. Of these, 34 recovered, and 115 died. In the latter months of the year the epidemic increased, not only in extent but in malignancy, so that against 56 tracheotomies with 30.3 per cent. recoveries in the first half of the year, there were 93 tracheotomies with only 18.2 per cent. recoveries in the second half of the year. The epidemic was at its height in October, November, and December; and of 62 children tracheotomised during that time, only 12 per cent. recovered. The patients were generally admitted at an advanced stage of the disease. In many, the diphtheritic affection had extended from the throat to the nasal passages; in such cases the prognosis was most unfavourable. Many cases were associated with measles, or with scarlet fever, and were then especially liable to terminate fatally. The greatest mortality occurred in children under 3 years of age. In the first year of life no operation was performed; but in the second year there were 29 cases with 3 recoveries, and in the third year, 27 cases also with 3 recoveries. The percentage of recoveries increased with the age and capacity of resistance of the children. Dr. Koerte regards croup and diphtheria as different degrees of the same affection; and considers that they cannot be distinguished clinically, although they present certain pathological differences, the nature of which, however, he does not state. With regard to the after-treatment, inhalations of weak solutions of lactic acid, when membranes were present in the trachea, of common salt or alum, when there was much

muco-purulent secretion, were administered every two or three hours. Internally, chlorate of potash, wine, and camphor, were given. No remedies were applied locally to the throat, except when the mucous membrane was deeply affected. With the exception of cleansing the cannula, and clearing the trachea of membranes by mopping it out with a feather, Dr. Koerte does not regard the after-treatment as having had any appreciable influence upon the course of the disease. The relief that is obtained by inhalations is to be attributed to the steam rather than to the medicaments. He thinks that the results, fatal or otherwise, depend entirely upon the severity of the epidemic, and not upon the treatment; as, during the year 1877, when the epidemic was much less severe, with 40 per cent. of recoveries, and during the first half of 1878, with 30 per cent. of recoveries, the treatment was the same as that pursued when the epidemic was at its height, during the second half of the year 1878, with only 18 per cent. of recoveries. Most of the deaths occurred within three days of the operation, the cause of death being in some cases collapse, but in the majority dypsnœa from the extension of the membranes into the smaller bronchial tubes, for the clearing of which inhalations appeared quite inoperative; indeed, in these cases, little seemed to be gained from the performance of tracheotomy. [It does not appear, however, that the suction method, strongly recommended by Mr. Parker, for removing membranes from the bronchi, was resorted to.] The deaths that occurred more than three days after the operation, were generally due to broncho-pneumonia and infection of the wound. When the wound became infected, disinfectants, and occasionally cauterisations with chloride of zinc, were resorted to. In one case, albumen appeared in the urine, and suppuration of the shoulder-joint occurred. The patient recovered after the shoulder-joint had been opened antiseptically. In another case, diphtheria occurred for the second time. Tracheotomy was performed on each occasion, and the patient recovered. Three cases of papilloma of the glottis are reported. Case 1. A child, aged 8 years, had for a year suffered from hoarseness, and sometimes dyspnœa. The larynx was almost filled by papillary masses growing from the vocal cords. Three months later, the larynx was opened by dividing the cricoid cartilage, cricothyroid membrane, and the lower portion of the thyroid cartilage in the middle line; the growths were then removed with the scissors and a sharp spoon, and their bases cauterised. Cicatrisation of the wound was followed by a slight narrowing of the larynx. Four months after the operation, bougeal dilators were used and Dupuis' tube introduced. The tracheal cannula was removed, and the wound allowed to heal. The patient was discharged with the voice hoarse. Both vocal cords were involved in the cicatrisation; they were shortened and their movements much impaired. Case 2. A woman, aged 30, had, for six months, had difficulty in breathing. Tracheotomy was performed. The right vocal cord was found normal, but the left was almost covered by a tumour with a broad base, which nearly occluded the lumen of the glottis. An operation was not allowed, and the patient was discharged, wearing a cannula. Case 3. A woman, aged 47, had often suffered from hoarseness, and for six weeks had had great difficulty in breathing. Beneath the vocal cords, papillary masses were perceived narrowing the lumen of the larynx. Tracheotomy was performed, and shortly afterwards the larynx was opened, the masses removed with the scissors and knife, and the actual cautery applied to the base of the growths. The wound in the larynx and in the thyroid cartilage cicatrised; but the patient could not dispense with the cannula. Dr. Koerte remarks that these three cases belong to that class of tumours which, from having a broad base and penetrating deeply in the mucous membrane, can only be removed by opening the larynx and seizing them from the front. It is very easy to open the larynx when the trachea has been incised; an incision of part of the thyroid cartilage being sometimes sufficient to make the glottis entirely accessible. Two patients were treated for syphilitic stenosis of the larynx, and one for stenosis of the trachea following diphtheria. In one of these patients, in whom the vocal cords were completely destroyed and speech was lost, an artificial vocal apparatus in the form of a tube provided with a vibrating tongue, was introduced into the larynx by the mouth. By means of this the patient was able to speak, but it failed to be of any permanent use, in consequence of the metal tongue becoming clogged by particles of food, which could not be prevented, on account of the loss of the epiglottis, from entering the tube. In the case in which tracheotomy was performed for diphtheria, stenosis of the trachea occurred, in consequence of ingrowing granulations immediately above the tracheotomy wound, so that on the cessation of the diphtheria the cannula could not be dispensed with. The granulations were removed by scraping; and dilatation of the constriction with various curved bougies completely relieved the patient. The tracheotomy wound was then allowed to heal. The stenosis recurred in a month's time; tracheotomy was again performed, and the constriction successfully dilated as before. The wound again healed, but within a week or two asphyxia suddenly came on, the tracheotomy and dilatation were repeated a third time, and when the report was published, the patient was still under treatment.

3. *Cohen on External Incisions for the Removal of Benign Intralaryngeal Neoplasms.* — Dr. Cohen (*Archives of Laryngology*, vol. i, No. 2) says that the removal of intralaryngeal growths by section of the cricoid and thyroid cartilages is to be avoided. Division of the cricoid is apt to impair the solidity of the laryngeal skeleton, and may be followed, though rarely, by necrosis. Division of the thyroid cartilage is extremely liable to injure the voice, in consequence of the anterior portion of the vocal cords being involved in the cicatrisation, and thereby becoming diminished in length. When the growth is in the upper portion of the larynx, subhyoid pharyngotomy should be performed, especially in children, in preference to thyrotomy. Dr. Cohen, however, gives a case to show that subhyoid pharyngotomy does not always give sufficient room in children for a successful operation. A tumour was found at the anterior commissure of the vocal bands in a child five years old who had been aphonic from birth. The operation of subhyoid pharyngotomy was performed; but, when the epiglottis was drawn out through the wound, it was found impossible to illuminate the interior of the larynx to a degree sufficient to expose the growth to vision. Attempts were made to remove the growth by forceps, but the opening was too small to admit the passage of both finger and forceps, and the growth could not be distinguished from the supra-arytenoid cartilages without either digital aid or illumination. Small growths, immediately beneath the vocal bands or upon their

edges, which cannot be reached by an intralaryngeal operation, Dr. Cohen advises to be removed through an incision in the middle crico-thyroid ligament. This operation, he says, is the easiest of the series, involves the minimum risk incurred in artificial openings into the air-passage, leaves but an insignificant external cicatrix, and does not engender any impairment of vocal function. [There are two other plans for extirpating growths that cannot be removed by the ordinary intralaryngeal method which should not be lost sight of; the so-called subcutaneous operation of Langenbuch, in which a small tenotomy-knife is introduced through the middle line of the thyroid cartilage (see LONDON MEDICAL RECORD for July 1880), and the method, recently successfully adopted in several cases in children where the growths were below the vocal bands, *viz.*, scraping out the growths by a peculiarly shaped instrument, a combination of a knife and catheter, which allows the patient to breathe through the catheter while the operation is being performed. (See LONDON MEDICAL RECORD for November 1880.) Papillomatous growths in children, moreover, not unfrequently disappear; and it seems questionable whether, in many instances, it would not be better simply to perform tracheotomy, and wait for the spontaneous disappearance of the growth. —*Rep.*]

4. *Fritsche on Aphonia Spastica.*—Dr. Fritsche communicates six cases (*Berliner Klinische Wochenschrift*, Nos. 15 and 16, 1880) of this affection, which was first described under this name by Schnitzler in 1875. It consists in cramp of the muscular apparatus of the larynx on attempted phonation (an affection analogous to writer's cramp), with total loss of voice. On laryngoscopic examination, the vocal cords were seen to be pressed tightly together, not presenting an elliptical opening; but, on making violent efforts, sufficient air was forced through the glottis posterior to the vocal processes to produce an interrupted convulsive whisper. In the slighter forms of this affection there is only a momentary spasmodic closure limited to the anterior part of the glottis. Electricity, especially the constant current, is the treatment of the most value.

5. *Gerhardt on Functional Spasm of the Larynx.* —Under this name Professor Gerhardt relates a case (*Archives of Laryngology*, vol. i, No. 2; *Rocky Mountains Medical Review*, September 1880) very similar to the affection described by Dr. Fritsche, as aphonia spastica. (See foregoing article.) The symptoms of this case, however, resemble more closely those of writer's cramp than do Fritsche's cases of aphonia spastica, inasmuch as the spasms came on only when the patient pronounced certain words or syllables. Professor Gerhardt also reports the case of a flute-player who suffered from a spasmodic affection of the larynx whenever he produced certain notes.

6. *Lidén on a Case of Tying the Left Common Carotid Artery after Tonsillotomy.*—In this case (*Hygeia*, Band xlii, April 1880; Schmidt's *Jahrb.*, Band clxxxvii, No. 8, 1880) extirpation of the left tonsil had been performed in the usual manner for excessive hypertrophy. The hæmorrhage was not very great after the operation, but it did not cease after gargling with cold water, and became more and more abundant in spite of preventive means. After cauterisation with lunar caustic, and application of perchloride of iron, it stopped for an hour, then recommenced, the clots becoming larger and more frequent. There was no arterial bleeding. Bladders of ice laid on the neck, and ice in the mouth, diminished the hæmorrhage for a time; but afterwards it came on afresh and more violently. The patient's strength was failing, the pulse 130, weak and irregular. Three hours after the tonsillotomy, the common carotid artery was tied with carbolised silk, and immediately afterwards the bleeding from the mouth stopped. There was no pain felt on tying the carotid, nor pain in the head afterwards. Recovery was very slow, the patient not leaving her bed for three weeks. She had always been weak and chlorotic; and had always experienced strong pulsation of the left side of the neck, and very rapid action of the heart. There were no signs of hæmophillia either in the patient or in her family. Dr. Lidén thinks that an abnormal ramification of the vessels was the cause of the bleeding. [A very simple method of arresting hæmorrhage after excision of the tonsils, and one that does not seem so often resorted to as it deserves, is by pressure with a pad of lint on the end of a short stick.—*Rep.*]

7. *Spagnolo on a Case of Obstinate Hæmorrhage after Partial Excision of the Uvula.*—This case is reported in *L'Union Médicale d'Orient*, No. 24, 1880. The operation of excising the uvula was performed for obstinate catarrh in the throat on a patient who had suffered much previously with gastric disturbance. The trifling hæmorrhage following the operation was allayed by gargling with cold water, but it came on again four hours after the operation, and was arrested by the application of perchloride of iron. The presence of blood in the fæces the next morning was considered a proof that the hæmorrhage had continued during the night, and perchloride of iron was again applied to the uvula. Bleeding did not return, but the patient died in a few days. He had previously to, and, after, the removal of the uvula, suffered from severe gastric symptoms, and Dr. Spagnolo does not consider that the death was due to the hæmorrhage. [Indeed it is quite evident, from the details of the case, that it was not so.—*Rep.*]

8. *Heinze on a Case of Angioma of the Larynx.*— This case is reported in the *Archives of Laryngology*, vol. i, No. 2 (*Rocky Mountains Medical Review*, September 1880). The tumour projected from the right ventricle of the larynx, and was removed by means of the simple wire loop, followed by the galvano-cautery. Profuse hæmorrhage followed the use of the simple loop, and Dr. Heinze urges the application of the galvano-cautery in such cases to avoid the possible danger from hæmorrhage. A piece of the growth removed lost its black colour, and became bluish-grey, and showed, on section, a fine spongy structure. The microscope revealed a network of connective tissue, with blood in the interstices, and numerous blood-vessels. Dr. Heinze was able to find only five cases previously reported.

11. *Schäffer on a New Simple Laryngoscopic Lamp.*—Dr. Schäffer (*Deutsche Medicinische Wochenschrift*, September 25th, 1880) describes a portable laryngoscopic lamp for the use of the general practitioner. It consists simply of two cylinders, one of which fits over the other. The inner one is provided with an oblong aperture in the side, the outer with a lens. The lens-cylinder can be lowered or raised over the other to the height requisite to bring the lens opposite the flame. The inner cylinder is so constructed that, by the addition of one or two rings to the bottom, it can be adjusted to a lamp of any form or size.

12. *Adams on a New Form of Electric Laryngo-*

scope.—Dr. A. Wellington Adams (*Rocky Mountains Medical Review*, September 1880) describes an instrument for adapting the electric light to laryngoscopy, rhinoscopy, etc. It consists of a concave mirror, in front of which is placed a glass carbonic acid vacuum tube twisted in the form of a spiral, and having a fine platinum wire hermetically sealed within it. The mirror and tube are fixed by means of an universal joint to a handle, to which also is attached a shank made of some light metal embedded in such a way as to bring the circular throat-mirror, which is attached to its free extremity, on a level with the spiral vacuum-tube. The throat-mirror is also fixed to the end of the shank by means of a ball-and-socket joint, so that it can be adjusted to any desirable angle. Two binding posts in electrical communication with the platinum wires projecting from the extremities of the spiral vacuum tubes are fixed on each side of the handle. Dr. Adams prefers a battery consisting of three of Leclanché's cells, as this form of battery requires little special attention or renewal from one month to several years, according to use; and as it is only necessary to break the continuity of the circuit to stop its action.

15. *Wolff on Operation for Cleft Palate.*—In a clinical lecture on the operation for cleft palate, Professor Wolff (*Archiv für Klinische Chirurgie*, Band xxv, Heft 4) exhibited a patient on whom he had operated six years previously. The clefts in both the hard and soft palates were closed in one sitting; the former united by the first intention; but the sutures of the soft palate gave way. After another operation the soft palate was successfully closed, with the exception of the uvula. Speech, however, was but little improved, notwithstanding the intelligent efforts of the patient to overcome the defect by practising reading and speaking. Professor Wolff first thought of dividing the palate again, and filling the gap with an obturator, as recommended by Suersen and Simon. Before resorting to this expedient, he sought some form of obturator by which speech might be restored without redivision of the palate. After several failures, he contrived, with the help of Herr Schilsky, an obturator which completely fulfilled this purpose. It was made of soft India-rubber, was of an irregular cubical shape, and was fitted like a plug in the space between the back of the soft palate and posterior pharyngeal wall, to which space, indeed, it roughly corresponded in outline. It differed from the other forms of obturator in being hollow, and containing air in its interior. It was fixed in position by means of a firm stem of vulcanite running forward along the line of suture of the palate to a palate-plate secured in the usual way by gold hooks to the teeth. With the aid of this obturator the patient could pronounce distinctly with almost an entirely pure accent, and almost without a nasal twang. She could produce, with but very little trouble, all the letters of the alphabet clearly, and not only *m*, *n*, and *ng*, which require an unhindered stream of air to pass through the space between the nasal and oral cavities, but also the rest of the consonants which demand a complete closure of those cavities from each other. The reason of the superiority of the soft and hollow obturator over the hard lies in the fact that, in the former, both muscles—the constrictor of the pharynx, and the levator and tensor palati are utilised; in the latter, the constrictor only. When the constrictor pharyngis is exerted, the convexity it produces in the hinder pharyngeal wall approaches the hinder surface of the obturator so as to effect some sort of a closure, but more or less incomplete, of the oral from the nasal cavity. It is only in this degree that a hard obturator is capable of assisting in the production of speech. But when the obturator is soft, and contains air, it is influenced by the action of the levator and tensor palati, which, by exciting a powerful pressure upon its anterior surface, cause a corresponding bowing out of its posterior surface; and this meeting the forward projection of the hinder pharyngeal wall, caused by the action of the constrictor, is quite sufficient to produce a complete closure. Dr. Wolff mentions, as other advantages connected with this obturator, that it has half the weight of the ordinary hard obturator, fits more closely, does not enlarge the opening in which it lies, and causes neither inflammation nor pain. Dr. Wolff remarks that in a small class of cases speech is entirely restored after the operation of cleft palate; in a second class, it is much improved, and capable of still further improvement by practising reading and speaking, and the use of electricity; but in by far the greater number of cases, the formation of a flap to the palate is not possible by operation, and, in such cases, practice, electricity, etc., are valueless. In those cases, therefore, where the operation has proved ineffectual to restore speech, it has become the acknowledged treatment to again divide the palate, and lay in an obturator: the question, then, naturally arises, whether it would not have been better not to have operated at all. Dr. Wolff considers that the case he has brought forward sets this question at rest, since the need of a secondary division is obviated by the invention of an obturator which can be introduced without it.

16. *Robinson on the Therapeutic Value of Rest in the Treatment of Laryngeal Disease.*—Dr. Beverley Robinson, in a paper read before the American Laryngological Association (*Archives of Laryngology*, September 1880), urges the importance of rest as a factor in the treatment of laryngeal affections. The functions of respiration and phonation demand the constant action of the intrinsic laryngeal muscles. To control these actions as much as possible, is to secure the best possible conditions for cure. After insisting upon the advantage of rest in acute and chronic laryngitis, the author recommends in subacute cases that 'a happy medium' course of treatment should be observed, not allowing the voice to grow rusty, but, at the same time, limiting the vocal work to slight and occasional efforts. The working of the larynx should be carefully watched. If the cords cannot approximate the middle line, but leave a slight oval chink between them, complete rest is enjoined. Intralaryngeal appearances sometimes lead into error of treatment. In some patients, whose vocal cords invariably appear red and inflamed, but who are still capable of producing accurate and full notes, the moderate use of the voice is beneficial; in others, in whom the mucous membrane is only slightly reddened, but the muscles are incapable of proper motion through loss of contractile power owing to intercellular infiltration and consequent compression of the peripheral nerve-fibres, singing and talking should be forbidden. The author considers the best argument in favour of absolute rest in numerous laryngeal affections is offered by those cases where tracheotomy has been performed, as in chronic laryngitis, ulcerative and phthisical laryngitis, nervous affections of the larynx, morbid growths of the larynx, and traumatic laryngitis, in which, after the operation, ameliorative, if not

curative, results are constantly observed. Dr. Robinson is of opinion that tracheotomy in ulcerative phthisical laryngitis should be resorted to far more frequently than it is, and at a much earlier date of the malady, not as a temporary relief, but as a means of permanent recovery, seeing that this affection has already been cured more than once by wearing a tracheal cannula for several months. As an example of the service afforded by rest from tracheotomy in morbid growths, the author quotes a case of a recurrent epitheliomatous growth; the cauliflower excrescences entirely disappeared in a few months after the tracheotomy, and there was no further progress of the local infiltration up to within a short period of the patient's death, which was probably occasioned by secondary malignant deposits.

17. *Krishaber on Spasm of the Glottis in Locomotor Ataxy.**—This affection, first noticed by Cruveilhier and afterwards by Bourdon and Féréol, has been recently described by Professor Charcot under the name of 'Laryngeal Vertigo'. According to Dr. Krishaber, who founded his remarks on four well-marked cases, the spasm may occur in three different degrees; 1. A cough like that of whooping-cough. 2. Suffocative fits without loss of consciousness; 3. Epileptic movements and imminent asphyxia necessitating tracheotomy. It is especially interesting as being a premonitory phenomenon to tabes dorsalis. The intermittent nature of the symptoms, the transitoriness of the suffocative fits, and, finally, the laryngoscopic examination, prove that it is due to a spasmodic contraction of the constrictor muscles of the glottis, and not to a paralysis of the dilators.

18. *De la Sota on the Pathological Action of Tobacco on the Throat.*—M. Ramon de la Sota described three forms of pharyngo-laryngeal angina caused by tobacco. The first, purely erythematous in its nature, is characterised by patches of dark red, irregular in outline, without dilatation of the vessels or peripheral swelling. There is no sensation except that of dryness, principally felt on waking, and disappearing when smoking is left off and cooling gargles are used. In the second form, vesicles occupy the soft palate, some of which dry up in three or four days and are replaced by greyish spots; others break, and occasion erosions very painful when the patient eats or smokes. It is not rare to find analogous vesicles on the lips, inside the cheeks, and on the sides of the tongue. Cure quickly follows the disuse of tobacco, and the use of astringent gargles. The third and most tenacious form is met with in the manufacturers of tobacco and very great smokers. The mucous membrane of the pharynx and larynx is swollen, of a livid-red colour, covered in places by a thick and viscid mucus, and studded with little granulations surrounded by varicose vessels. In this variety there exists, conjointly with the symptoms of the first two varieties, a frequent cough, a kind of hem; the voice is relaxed, and of small compass. Discontinuance of smoking, absolute rest from speaking, inhalations of salt-water, and cauterisations of bichromate of potassium are the treatment indicated.

19. *Schmidt and others on Tuberculous Laryngitis.* M. Schmidt recommended the removal of the affected parts by a special form of laryngeal scissors, and said that by this means he had obtained 19 recoveries out of 315 cases, or 6 per cent. In a discussion which followed, upon the curability of laryngeal phthisis, MM. Stoerck, Schnitzler, Gouguenheim, and Massei stated that they each had recorded cases of recovery. M. Krishaber, on the contrary, had never met with one. He had always found the affection fatal, and having a quicker course than pulmonary tuberculosis. He had come to the conclusion that malignant tubercles could be distinguished, at any rate clinically, from benign tubercules, and that the larynx is constantly the seat of the malignant form. The ulceration of the larynx doubtless might cicatrise of its own accord, as is well proved by the cicatricial marks often seen in the larynx; but the patient does not recover. Ulceration recurs again at a new spot, extends, and increases at a rate common to malignant affections.

20. *Heinze on a Rare Form of Syphilitic Stenosis of the Larynx.*—M. Heinze described a stenosis of the larynx produced by the adhesion of the epiglottis to the posterior wall of the pharynx. The fibrous adhesions were divided with the galvano-cautery, but so serious a hæmorrhage resulted that ligature of the external carotid was resorted to. M. Krishaber has observed, after the partial excision of the epiglottis, an almost fatal hæmorrhage, which did not cease till after syncope had set in.

21. *Rosbach on a Method of Anæsthetising the Larynx.*—The method of M. Rosbach consisted of the hypodermic injection of 6 milligrammes of morphia on both sides of the larynx, at the point of entrance of the superior laryngeal nerve. M. Krishaber doubted whether a local anæsthesia could be obtained by so weak an injection; the effect was more probably due to the general action of the medicament. He himself had only once had occasion to produce anæsthesia in a case of polypus of the larynx, without, however, finding any satisfactory result follow. [Solutions of carbolic acid and chloral hydrate applied with a brush were very successful in the hands of Dr. Glasgow (see LONDON MEDICAL RECORD, February 1880). The reporter has made use of these, and has found them of much service.—*Rep.*]

22. *Barétry on Stridulous Laryngitis.*—M. Barétry remarked that stridulous laryngitis or false croup is often confounded with croup and spasm of the glottis. He had always found it to depend upon some irritation of the recurrent laryngeal nerve produced by acute or subacute swelling of the tracheo-bronchial glands. No case of false croup had come under his notice which was not associated with a swelling of these glands in various degrees. Children, the subjects of it, had always presented signs of a lymphatic temperament, and one of the parents had often been the subject of pulmonary tuberculosis.

23. *Massei on Affections of the Ventricles of Morgagni.*—After showing how difficult in general these affections are to diagnose, M. Massei concluded by saying that if a tumour in this situation is diagnosed, it is almost sure to be either cancerous or sarcomatous, and that the difficulty of operating by the natural passages makes it necessary to extirpate the affected organ, provided, however, that the diagnosis has been made in time.

24. *Massucci on Nasal Douches of Compressed Air.*—M. Massucci read a paper on the employment of nasal douches of compressed air, either pure or medicated with terebinthine, carbolic acid, etc., after the method of M. Massei. He obtained in this way not only the cure of affections of the pituitary membrane, but also the mechanical dilata-

* This and the following are abstracts of papers read before the congress of Laryngology at Milan, taken from the *Annales des Maladies de l'Oreille et du Larynx*, Nov. 1880.

tion of the nasal fossæ in the case of narrowing of these cavities.

25. *Labus on Relaxation of the Uvula.*—M. Labus called attention to the physiological movements of the uvula situated in the middle of the organ of sound, and to the alteration both in the 'timbre' and intensity of the voice each time that the function of the uvula is not fulfilled. (An abstract of M. Labus' paper is given at page 7.)

26. *Cervesato on Cysts of the Larynx.*—The author considered these due to the retention of the secretory products of the mucous glands of the larynx during the course of a chronic pharyngo-laryngeal catarrh. They generally grow at the expense of the glands of the epiglottis, and of those of the mucous membrane of the inferior vocal cords.

27. *Læwenberg on a Case of Myxo-Sarcoma of the Pharynx.*—The tumour had occurred in a child 5 years of age. It was removed in great part by the finger during the course of a digital exploration.

28. *Elsberg on Simple Erosions of the Epiglottis.*—Such erosions had been found by M. Elsberg occurring as the result of violent and obstinate cough. They disappeared in a short time by painting them with a solution of nitrate of silver or chloride of gold. W. J. WALSHAM.

29. *Buchanan on Tracheotomy in Croup and Diphtheria.*—In the *British Medical Journal*, April 1880, p. 554, Dr. George Buchanan again insists, as he has done in previous communications to the same journal, upon the great importance of distinguishing those cases in which tracheotomy is likely to be successful from those in which no permanent benefit can accrue, and to do this is apparently simple. 'When the obstruction is situated in the trachea or larynx, the lungs remaining normal, the efforts of the child to obtain breath are painfully visible by the powerful drawing inwards of the ensiform cartilage, the intercostal spaces, and every elastic part of the chest-wall; showing the thirst for air and the capacity of the lungs to receive it if only it could gain entrance. But, when the smaller bronchial tubes are full of viscid and perhaps pseudo-membranous effusion, the movements of the chest-walls are impeded; the chest is puffed out like one affected with chronic emphysema of the lung, and heaves in a mass with difficulty. In the first of these cases tracheotomy affords instant relief—often permanent—and ultimate saving of life; in the second, if unfortunately it be performed, it affords at best a temporary and short interval of repose, if even that, and only when the element of spasm is present.' In croup, Dr. Buchanan saved seven out of seventeen cases; in diphtheria, twelve out of thirty-three; and as the operation was undertaken in each case when only there was no hope of recovery otherwise, it may be fairly stated that the lives of nineteen children were *saved* by tracheotomy. R. NEALE, M.D.

30. *Riesenfeld on the Treatment of Chronic Catarrh of the Pharynx.*—Dr. Riesenfeld, of Breslau (*Annales des Maladies de l'Oreille, du Larynx, etc.*, June 1880), has treated about 50 cases of this affection by the galvanic cautery, according to Michel's method, and confirms in all respects that observer's good results. Unlike Michel, however, the author has not confined this method of treatment to cases in which the glands were hypertrophied, but has used it indiscriminately in cases of chronic catarrh of the pharynx. The duration of the disease varied from six weeks to twelve years. The great majority of the patients were men; only very few being women or children. The author employed a knife-shaped cautery, with which he made superficial scarifications in the form of lines (from three to five millimètres in length) on the posterior wall of the pharynx. The uvula and tonsils were cauterised with a pointed terminal. He never omitted to cauterise the latter. This little operation is, according to the author, always well borne, even by children. There being sometimes very slight hæmorrhage after the cauterisation, the author directs the patient to gargle with cold water immediately afterwards. Slight difficulty in swallowing sometimes occurs, which easily yields to cold compresses around the neck. Slight eschars are seen on the mucous membrane after four or five days; the tonsils alone sometimes suppurate, but heal in eight days at the longest. In mild cases, a single application suffices; most commonly the cauterisation was repeated five times at longer or shorter intervals.

31. *Martel on Simulated Aphonia.*—Dr. Martel (*Annales des Maladies ae l'Oreille, du Larynx, etc.*, June 1880) describes the following laryngoscopic phenomena as characteristic of this affection. The patient, on being told to emit a sound, renders the vocal cords tense and approximates them apparently with great effort, and then, when he finds that he can go no further without danger of emitting a sound, suddenly separates the vocal cords to the extent of two or three millimètres, and allows a column of air to escape by a simple expiration. During straining, the cords act normally. The expiration of the simulator also only lasts one or two seconds, whereas in true aphonia it may be of ten seconds' duration. The author finally relies on the application of the electric current in these cases.

32. *Moure on Papillary Tumours in the Larynx of a Child.*—Dr. E. J. Moure (*Annales des Maladies de l'Oreille, du Larynx, etc.*, June 1880) observed the following case in the *clinique* of Dr. Fauvel. The patient, a boy aged 5 years, had suffered from progressive hoarseness for three years, accompanied by difficulty in breathing which became more marked when he was excited. For six months the respiration had been constantly impeded and laborious, the inspiration being occasionally whistling in character. From time to time attacks of cough resembling that of pertussis occurred. At the Children's Hospital, he had been treated for bronchial adenopathy without benefit. On examination, the thorax was found normally resonant, but vesicular murmur weak. There was marked dyspnœa, with stridor, and the voice was uniformly hoarse. The pharyngeal mucous membrane was normal. The laryngoscope, which was well borne, showed, on a level with the glottis, numerous little warty growths, greyish white in colour, and of about the size of a large pin's head. The tumours were sessile on the laryngeal mucous membrane, which appeared between them of a rose-colour. All the symptoms were thus easily accounted for. Removal of the growths was proposed, but the patient was not seen again. This case, the author rightly thinks, shows the importance of a laryngoscopic examination being made in children in doubtful cases; and the author states his opinion that both in hospital and private practice the laryngoscope is far from occupying its proper position.

33. *Koch on Ignipuncture in Affections of the Aërial Primæ Viæ.*—Dr. Paul Koch (*Annales des Maladies de l'Oreille, du Larynx, etc.*, Nov. 1880) has employed ignipuncture by means of Paquelin's thermocautery in the following affections. 1. In recent cases of labial cancroid (epithelioma), before the deep tissues of the lips are affected, with good result

and without relapse. 2. In three cases of fibrous tumour of the gums, after the greater part of the tumour had been removed with curved scissors, the remainder was destroyed by ignipuncture. Violent neuralgia followed the cauterisation in all three cases; the author, therefore, warns against using ignipuncture close to the periosteum, the nervous ramifications, and the teeth. 3. In cases of slight enlargement of the tonsils not sufficiently marked for tonsillotomy, and as an adjunct to tonsillotomy, when any remaining portions are subject to attacks of inflammation. 4. In cases of œdema and chronic enlargement of the uvula, by cauterising the tip of that organ. 5. In granular pharyngitis, the author has employed it with great satisfaction for more than a year. He destroys six granulations at each sitting, repeating this twice weekly. More than two weeks are rarely required to reduce the pharynx to a more or less normal condition. The author's experience in this disease confirms the results obtained by Krishaber. (See LONDON MEDICAL RECORD, July 1880.)

34. *Windelschmidt on Foreign Bodies in the Air-Passages.*—Dr. Windelschmidt (*Monatsschrift für Ohrenheilkunde*, July 1880) relates two cases of the above. Case I is that of a boy, aged 4 years, into whose mouth a bean was thrown, which he tried to swallow whilst laughing. One hour afterwards he was found sobbing, with prolonged inspiration and rapid expiration. The œsophageal bougie and laryngoscope gave negative results. A distinct rattle was, however, heard in the trachea at each respiratory movement. Inversion, and afterwards a powerful emetic, were tried without result. As there was no marked dyspnœa, the patient was sent to the hospital, but died on the way in the carriage from a sudden attack of suffocation. The author thinks that tracheotomy undertaken immediately after the entrance of the foreign body might perhaps have saved the patient's life, and that in these cases no time should be lost in temporising.—Case II occurred in a man, aged 30, who, having come home drunk, sat down to a meal of sauer-kraut and bacon. He then, after a single hiccough, placed his head on his folded arms on the table, and, after the space of an hour and a half, was found dead, and quite cold. A piece of fat the size of a thumb-joint was found impacted in the larynx, and the epiglottis lying on it.

35. *Voltolini on Chorea of the Larynx.*—Professor Voltolini (*Monatsschrift für Ohrenheilkunde*, July 1880) relates the following interesting case. Agnes F., aged 12, had suffered last winter from a loud 'barking' cough for some time, when it suddenly ceased, and, although violent irritation and urgent desire to cough existed, the patient was quite unable to cough, *i.e.*, the larynx became spasmodically closed. The patient then threatened to suffocate, becoming livid in the face, and struggling violently for breath. When seen by the author, neither internal nor external examination showed anything abnormal. The patient spoke with a clear distinct voice, but when she was directed to cough this was found impossible; she was absolutely unable to produce an expiration. It was remarkable that, as long as the laryngoscopic mirror remained in the throat, she could cough quite comfortably. Under treatment by bromide of potassium (only continued for a short time) and the electric current (constant and induced at alternate sittings) applied endolaryngeally, the first signs of improvement were manifest after a fortnight. The 'barking' cough gradually returned, and then gave place to an ordinary normal cough.

E. CRESSWELL BABER, M.B.

OPHTHALMOLOGY.

RECENT PAPERS.

1. BURNETT, S. M.—On Colour-Sense: the Method of Testing it by Coloured Shadows. (*American Journal of the Medical Sciences*, Oct. 1880.)
2. MENGIN.—On a Case of Gonorrhœal Iritis. (*Recueil d'Ophthalmologie*, Nov. 1880.)
3. PARENT.—Notes on Retinal Reflexes. (*Ibid.*, Aug. 1880.)
4. WARLOMONT.—On Nystagmus. (*Annales d'Oculistique*, July-August 1880.)
5. CLOZIER, HENRY.—On Locomotor Ataxy with Atrophy of the Optic Disc, etc. (*Recueil d'Ophthalmologie*, September 1880.)
6. BOUNTALI.—On Egyptian Ophthalmia. (*Ibid.*, Sept. 1880.)
7. GALEZOWSKI.—On Gouty Cataract. (*Ibid.*, Sept. 1880.)
8. GALEZOWSKI.—On Diabetic Cataract. (*Ibid.*, Aug. 1880.)
9. GALEZOWSKI.—On the Influence of Syphilis upon Cataract. (*Ibid.*, September 1880.)
10. GALEZOWSKI.—On some Rare Forms of Sympathetic Ophthalmia. *Ibid.*, November 1880.)
11. WARLOMONT and MOELLER.—On the Examination of Vision in Railway Employés. (*Annales d'Oculistique*, Sept. and Oct. 1880.)
12. CHIRALT.—On Epiphora. (*El Siglo Medico*, Oct. 1880.)

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1. *Burnet on Colour-Sense; the Method of Testing it by Coloured Shadows.*—Dr. S. M. Burnett (*American Journal of the Medical Sciences*, Oct. 1880) gives the following description of the above method. 'The examination is made in a darkened room. Two lights, a candle and a lamp, are placed on a table about twenty-five centimètres from the wall, which is covered with white paper. These lights are about twenty centimètres distant from each other. Before the lamp a coloured glass, say red, is placed. You will then have the white paper illuminated by both the red and the white lights. If you now place a lead pencil upright on the table, two centimètres distant from the wall, and equi-distant from the two lights, there will be two shadows, one thrown by the red light, and one by the white light. Where the white light is cut off by the pencil, there will be only the red colour; while, where the red light is cut off by the pencil, there will be only the white; but, by the law of contrasts, the shadow on the white ground will be the complementary colour of the coloured shadow; hence, to the normal eye, the one shadow will appear red, while the other will be green. To the colour-blind there will be no difference.

2. *Mengin on Gonorrhœal Iritis.*—Dr. Mengin records a case of gonorrhœal iritis occurring in a rheumatic subject. The patient, aged 28, had a strumous history. He contracted gonorrhœa, and subsequently purulent ophthalmia, which destroyed the left eye; severe gonorrhœal rheumatism next followed, and this was succeeded, eight weeks after the first appearance of the rheumatic symptoms, by a typical iritis, which yielded to energetic treatment. The author in such cases insists on the importance of local depletion, and of strong solutions of atropine. In this case, six leeches were applied round the orbit, and a 10 per cent. solution of atropine instilled five times in the first half hour, and subsequently three times, the patient having been previously cautioned not to swallow his saliva during the instillations. A grain and-a-half of calomel was also administered daily during ten days.

3. *Parent on Retinal Reflexes.*—Under the above title, Dr. Parent (*Recueil d'Ophthalmologie*, August 1880) considers in detail the following ophthalmological phenomena; 1. the central reflex of the vessels; 2. the retinal reflex proper; 3. the bright yellow ring seen at times around the macula; 4. the reflex of the fovea centralis. The first of these he considers due to the reflection of light by the anterior portion of the column of blood itself, quite independently of either the anterior or posterior walls of the vessels, as some authors (Snelling, Loring) have supposed. 2. The second phenomenon is best seen in young subjects, especially in those suffering from nystagmus. The mirror-like appearance in the retina is superficial, for it can be seen to pass in front of the vessels. It depends on the distribution of the membrana limitans interna, and the fibres of Müller in the retina. 3. The bright annular halo or 'phantom' of the macula, described also as the 'elliptical reflex', depends, in all probability, according to Dr. Parent, upon the fact that at this spot (namely, immediately around the macula) the membrana limitans is thicker than elsewhere, while the nerve fibres and fibres of Müller exist to a comparatively small extent. Most authors have held that this halo is only observable with the inverted image, but Dr. Parent has frequently seen it equally well in the direct image. He explains the fact of its disappearance in advanced life, by the changes which the membrana limitans interna undergoes, viz., that it becomes less hyaline, and consequently gives rise to a diffuse reflex, in which the halo becomes lost. As regards the reflex of the fovea centralis, the author, in opposition to Mauthner, considers it to be a real reflex, and shows that it can be seen equally well, under suitable conditions, with either the direct or indirect images. Dr. Parent concludes this paper, by insisting on the importance of the routine use of concave mirrors of short focal length for the direct examination, and of a plane mirror with a large object-glass of long focus for the indirect. He also habitually employs a convex lens behind the sight-hole of the mirror, in order to enlarge the indirect image. In this way only can the two great desiderata of increased magnifying power, without limitation of field, be secured. For the upright image he uses a mirror of from 5 to 6 centimètres focal length; for the indirect, an object-glass of from 50 to 55 millimètres in diameter, and 10 centimètres (10 D.) focal length.

4. *Warlomont on Nystagmus.*—Dr. Warlomont (*Annales d'Oculistique*, July-August 1880) thus concludes an exhaustive article on nystagmus. 1. The affection is in some cases due to an actual morbid condition of the brain (symptomatic nystagmus); in others, it is dependent, either primarily or secondarily, on anomalies of refraction, and has its seat in the motor muscles of the eye; in others, again, it depends on deficient muscular training due to imperfect vision, either acquired or congenital. 2. The causes of these different conditions are not identical, and their indications vary in each case. 3. The confusion which has hitherto existed as regards these causes will be no longer possible if the methodical classification which has been proposed in this article be adopted, viz. (*a*) nystagmus in non-amblyopic subjects; (*b*) in amblyopic subjects.

5. *Clozier on Locomotor Ataxy with Atrophy of the Optic Disc, etc.*—Dr. Clozier (*Recueil d'Ophthalmologie*, Sept. 1880) gives the histories of two cases of progressive locomotor ataxy, with atrophy of the optic disc and morbid changes in the fifth pair of nerves. The first case was that of a woman, aged 45, in whom symptoms of locomotor ataxy had existed, with remissions, for a period of seven years. Her present symptoms were slight plantar anæsthesia, pain in the lower limbs, absence of tendon-reflex, inco-ordination of movements. The right eye was insensible to light; the left possessed a fair amount of vision, which, however, was gradually failing. The pupils were unequal and strongly contracted. The ophthalmoscope showed in both eyes atrophy and grey degeneration of the disc, with vessels diminished in size. The second case occurred in a woman, aged 37, who dated her first symptoms so far back as 1865. In 1878, symptoms of anæsthesia were noticed, chiefly confined to the face and head, within the territory of the fifth pair. In the left eye, vision was abolished; in the right, there was perception of light. The right pupil was larger than the left. On both sides there was atrophy of the disc; more pronounced, however, on the left. The author remarks on the absence of a specific history in both these cases, and on the fact that in one of the patients, and probably in both, the disease first showed itself by eye-symptoms. In the first case, the ocular phenomena came on gradually and with remissions; in the second, rapidly and continuously.

6. *Bountali on Egyptian Ophthalmia.*—Dr. Bountali of Cairo (*Recueil d'Ophthalmologie*, Sept. 1880), in an interesting paper on purulent ophthalmia as seen in Egypt, states that, in his opinion, the disease is essentially the same in Egypt as elsewhere. The course of the disease is similar to what is seen in Europe, but it occurs with greater frequency, and on the whole is of a severer type. At times it becomes diphtheritic. It is a disease chiefly of early life. The main causes of its frequency and severity are to be found (1) in the sandy soil of Egypt; (2) in the unsanitary conditions in which the lower classes live; and (3) in the enormous number of insects which swarm in every part of the country, and are the chief instruments by which the affection is propagated.

7. *Galezowski on Gouty Cataract.*—Dr. Galezowski (*Recueil d'Ophthalmologie*, Sept. 1880) records four cases of cataract recurring in gouty subjects. These cataracts belong to the secondary stage of gout; that, namely, in which all the tissues have become thoroughly saturated with the poison. While occupied in looking for glucose in diabetic cataracts, Dr. Galezowski accidentally found that in many cases uric acid salts were present in the crystalline lenses of gouty subjects. Gouty cataracts appear most usually from the ages of 50 to 70, and are generally hard, though he has also seen them in younger subjects of a more or less soft consistence. Gout often acts as the predisposing cause, after operation, of various inflammatory affections of the iris, sclerotic, and less frequently of the choroid. In the gouty diathesis, cataracts often become adherent, and are complicated with synechiæ and narrowing of the pupil. The best chance of success in these cases is to place the patient for some weeks before operation on a strictly anti-arthritic regimen, and to give large doses of salicylate of soda. In some of these cases, some days after operation, a collection of blood forms in the lower part of the anterior chamber; in others, it remains suspended in the aqueous humour, rendering it turbid. This blood transudes from the iris or ciliary circle, and is a very constant manifestation of the gouty diathesis. In some cases it would appear that the gouty manifestations in the eye were due to the irritation of the wound, and hence were, in their

origin, traumatic. In such cases, local remedies are powerless, but the symptoms at once yield to large doses of salicylate of soda internally.

8. *Galezowski on Zonular Cataract.*—Dr. Galezowski (*Recueil d'Ophthalmologie*, Nov. 1880), in a paper on zonular cataract, remarks that, though these cataracts generally affect both eyes, yet they may do so in such an unequal degree as to escape notice in one eye. In this way, he thinks, are to be explained cases, such as that mentioned by De Wecker, in which a zonular cataract became developed in adult life. In such cataracts, vision is generally defective, and those so affected are obliged to hold objects close to their eyes; hence, zonular cataracts have often been stated to be associated with myopia, when really emmetropia or hypermetropia might have been present. The author looks on this form of cataract as essentially an arrest of development; when observed later in life, it is because it has undergone subsequent changes. He gives an interesting case of zonular cataract occurrring in an uncle and nephew, associated in the one with microphthalmos, in the other with nystagmus, on opposite sides of the face.

9. *Galezowski on Syphilis in Cataract.*—Dr. Galezowski (*Recueil d'Ophthalmologie*, Sept. 1880) considers that syphilis may cause cataract in the adult primarily, or predispose to it hereditarily. He gives details of a case of kerato-irido-choroiditis in a child of four years of age affected with syphilis from its birth. In this case, a cataract became developed, and the eye was enucleated. The author has seen, in all, nine cases of congenital cataract in children born of syphilitic parents. As regards the effects of syphilis in the adult, he has frequently seen cases of monocular cataract affecting an eye in which there was syphilitic choroiditis, while in the other eye the lens was perfectly transparent. He gives details of a case of syphilitic choroiditis attacking one eye, followed by the development of soft cataract six months afterwards in the other.

10. *Galezowski on Sympathetic Ophthalmia.*—Dr. Galezowski gives six cases of sympathetic ophthalmia which assumed irregular or unusual forms (*Recueil d'Ophthalmologie*, November 1880). The first case was one of exudative neuro-retinitis simulating albuminuric retinitis. The patient had lost the right eye thirty years before, during the whole of which period the stump had caused no unpleasant symptoms whatever; recently he began to be aware that the sight of the sound eye was failing, S=⅓. Ophthalmoscopic examination showed neuritis localised on the inner half of the disc, together with patches of exudation. The possibility of syphilis and albuminuria having been eliminated, a diagnosis of sympathetic retinal irritation was arrived at. The stump was enucleated when S improved to ¾; the field of vision still, however, showed a considerable scotoma. With the ophthalmoscope, the inferior portion of the papilla was atrophied, while all the patches of exudation had become absorbed. An arterial twig at the edge of the disc was also seen to have become obliterated and sclerosed, the result of endoarteritis and thrombus. The author suggests that in this case the sympathetic affection may have been transmitted to the retinal vessels by the nervi-vasorum. The second case was one of sympathetic spasm after accommodation, which ceased on removal of the stump of an atrophied eye. The third form of irritation mentioned by the author is that of the conjunctiva, and he gives two cases of conjunctivitis, rebellious to all remedies, which were relieved by removal of a rough and badly-fitting artificial eye. The fourth is iritis and keratitis, due to the same cause, of which two cases are given. The fifth form of sympathetic ophthalmia is that which attacks eyes which have been operated on for cataract. One such case occurred in the author's practice after a peripheral flap operation; another after a needle operation for secondary cataract; and a third in a gouty subject. In two, enucleation was practised; in the other, the symptoms improved under treatment. Under the sixth division, the author deals with sympathetic manifestations in the vitreous and choroid. He gives a case, occurring in his practice, in which a patient, aged 57, was attacked with choroidal hæmorrhages in the right eye due to sympathy. On enucleation of the left eye, the symptoms rapidly improved, so much so that the patient was able to read the finest characters, nor was there any subsequent retrogression.

11. *Warlomont and Moeller on the Examination of Vision in Railway Employés.*—The conclusions of the Committee appointed by the Minister of Public Works in Belgium to report upon the vision of railway employés, with special reference to the detection of Daltonism, have recently been made public (*Annales d'Oculistique*, September-October 1880). The committee recommends that in future all persons employed on the State Railways should, as regards their visual and chromatic acuity, be placed after examination in one of the following classes, viz., 'very satisfactory', 'satisfactory', and 'unsatisfactory', the latter class being inadmissible into the public service. The requirements of the first class are laid down as follows: 1. Eyes and eyelids healthy, and free from all habitual irritation or congestion; 2. Normal acuity (= 1); refraction perfect within the dioptric; 3. A normal field of vision; 4. The power of distinguishing colours to the extent of $\frac{4}{5}$ at least; 5. Complete freedom from cataract or other disease. For the second class the conditions are the same, except that in one of the eyes visual acuity must be normal, in the other it may be $\frac{1}{3}$, and the perception of colour must in one be at least $\frac{3}{5}$, in the other at least $\frac{2}{5}$. In the report is included the instructions for the examining medical officer, which are as follows. Holmgren's colour-test is the one recommended, the candidate being required to match all the shades of several given colours selected at random. Refraction is to be tested by Loiseau's optometer, which is constructed on the principle of finding the reading distance of the patient when using a lens of known focal length. Visual acuity is to be determined by the use of a series of three test types prepared *ad hoc;* the limits of the field of vision by the movements of the hand, held at the distance of 1 mètre.

12. *Chiralt on Epiphora.*—Dr. Chiralt, from a consideration of 19,000 cases of epiphora, which have occurred of late years in his practice, deduces the following canons of treatment (*El Siglo Medico*, Oct. 1880). In cases depending on simple stricture of the duct, catheterism may be used; but if this does not give speedy relief, then, without delay, cauterisation and destruction of the sac should be resorted to. By this latter method, 90 per cent. of cures can be obtained. The duration of this last mode of treatment may be placed at eight to ten days, and is described as being, after the first two days, absolutely painless. This method never causes accidents, while catheterisation may produce an obstinate dacryocystitis. After cauterisation, the sac does not close up completely, but remains more or

less patent, so that the method cannot in any way be called a destructive one. [The author does not give any details respecting his method of cauterisation, though, as he speaks of incision, he probably lays the sac open. The method seems altogether too severe for the majority of cases; while, in the worst and most obstinate, incision of the lacrymal gland, as practised by Abadié and others, is a more hopeful procedure.—*Rep.*] LITTON FORBES, M.D.

OTOLOGY.

RECENT PAPERS.

1. LADREIT DE LACHARRIÈRE.—The Action of the Constant Current in certain Affections of the Internal Ear. (*Annales des Maladies de l'Oreille, du Larynx, etc.*, Sept. 1880.)

2. POLITZER, A.—The Treatment of Aural Polypi. (*Wiener Medizin. Wochenschrift*, July 31st, 1880.)

3. GREEN, J. ORME.—Importance of Early Recognition of Ear-Disease. (*Transactions of the Massachusetts Medical Society*, 1880.)

4. REYNOLDS, LEWIS W.—Perforation of both Tympanic Membranes by Ascaris Lumbricoides. (*Lancet*, Oct. 1880, p. 653.)

1. *Ladreit de Lacharrière on the Constant Electric Current in certain Affections of the Internal Ear.*—Dr. Ladreit de Lacharrière (*Annales des Maladies de l'Oreille*, etc., Sept. 1880) relates the two following cases. Case I. Madame G. X., aged 23, menstruated regularly from 11 to 18½ years of age, when she married. Since then the length of the menstrual periods had progressively diminished, and for two years they had only lasted about one hour. The patient was very stout, and childless. Deafness came on at the same time as the menstrual troubles. In October 1879, when she consulted the author, the tympanic membranes were slightly in-drawn, but not thickened or congested. The Eustachian tubes were only slightly permeable. Catheterism was practised regularly for four months without satisfactory results. The deafness was always worse at the menstrual periods, being then almost absolute. The continuous current (10 to 14 elements) was applied for the first time in February 1880, and continued twice a week up to the date of the report. Improvement in hearing took place, and the patient could understand conversation even at a 'certain' distance, but she still complained that she was unable to hear well at the theatre.—Case II. Eugenie P., aged 23, had been deaf for four years without known cause. She had suffered from dysmenorrhœa. Tinnitus was first perceived at the beginning of 1879, and was accompanied by vertigo. She was first seen in January 1880. The tympanic membranes were normal, perhaps slightly retracted. The chains of ossicles appeared slightly congested. Treatment, consisting of inflation, bromide of potassium internally, etc., remaining without result, the continuous current was applied in April. On June 24th a marked amelioration had been obtained, the noise had diminished considerably, and the vertigo entirely disappeared. The author employs Gaiffe's constant current pile (usually 12 to 14 elements) and nipple-shaped rheophores, which fill the external auditory meatus. The application is never prolonged over five minutes, in order to avoid vertigo and even syncope, and as soon as any discomfort is felt the current is stopped. In this method of proceeding the author has never seen the least accident. The author has employed the continuous current in many cases of simple weakness of the acoustic nerves, and always with satisfactory results. This he considers a very general practice and not as presenting anything new. The author attributes the symptoms in these two cases to passive congestion of the labyrinth, and considers that the constant current, by increasing the contractility of the walls of the blood-vessels is a very efficacious agent in these cases. [It is to be regretted that, in the present uncertain state of opinion in regard to the value of electricity as a therapeutic agent in ear-diseases,* the author has not reported these cases more accurately; *e. g.*, there is no mention of the tuning-fork, nor is there any accurate statement with regard to the hearing power. It would also be of interest to know how the author distinguishes cases of weakness of the acoustic nerves in which he has found electricity of so much benefit.—*Rep.*]

2. *Politzer on the Treatment of Aural Polypi.*—Although Professor Politzer (*Wiener Medizin. Wochenschrift*, July 31st, 1880) finds the action of alcohol, as recommended by Löwenberg, excellent in some cases of chronic otorrhœa, he considers that, in regard to the frequency of its good effect, it is inferior to boracic acid, as recommended by Bezold, whilst, in the rapidity of action, it ranks second to the caustic method of Schwartze. In the treatment of polypoid growths, however, the author strongly recommends its use in the form of rectified spirit. This is applied either pure or (if this produces much pain) diluted with an equal quantity of water, and is poured thrice daily, warm, into the meatus, being allowed to remain there from ten to fifteen minutes. The indications for its use are, he considers, as follows: 1. In the treatment of remains of polypi in the meatus, on the membrana tympani, or in the tympanic cavity, which are not removable by operation; 2. In cases of multiple granulations in the meatus, or on the membrana tympani; 3. In diffuse hypertrophy of the tympanic membrane; 4. In cases in which mechanical impediments in the meatus prevent the removal of polypi by instrumental means; 5. It may be employed experimentally in order to avoid an operation if possible in very nervous persons and in young children. The author relates a case in which, after partial removal of a polypus growing from the meatus, a portion of the size of a pea still remained; but, as the patient had to leave the town on business, alcohol drops were prescribed. When he presented himself again after several months, the remains of the polypus had entirely disappeared. Other cases illustrative of the good effects of alcohol are also described. The author, it may be noted, expressly states that this treatment often requires to be continued for weeks or even months, and mentions that one of its chief advantages is that it can be employed with good effect by any surgeon, no especial skill in manipulation being required, as in the case of the application of strong caustics.

3. *Green on the Importance of the Early Recognition of Ear-Disease.*—Dr. Orne Green (*Transactions of the Massachusetts Medical Society*, 1880), after describing the different forms of inflammation which may attack the tympanum, draws attention to the amenability to treatment of the earlier and more acute forms of tympanic disease, which, he consi-

* See, for instance, the discussion in the subsection of Otology at the meeting of the British Medical Association at Cambridge. (*British Medical Journal*, Sept. 4th, 1880.)

ders equal to that of similar diseases in other organs. Unfortunately, however, as he mentions, the onset of many primary inflammations of the tympanum is so insidious, that it is only months or years after the first symptoms, when the interference with the functions of the ear is so great as to produce inconvenience in the ordinary affairs of life, that relief is sought. The slight deafness, with fulness in the ears, and perhaps tinnitus during a severe cold, which the patient regarded as 'nothing but a cold', is well known to all otologists. Another common reason for ignoring the earlier symptoms of tympanic disease, as the author points out, is that, when severe, they often improve to a certain extent spontaneously, which leads the patient to think that all trouble has been averted, whereas it is really simply a transition from an acute to a chronic form of inflammation. The extreme limit of normal hearing power is, also, seldom used in the ordinary affairs of life; and we may each be said to be endowed with a large amount of superfluous hearing, which may be lost without any inconvenience to ourselves. Again, 'the merciful provision of nature, which has endowed each of us with two independent organs of hearing', often leads deafness of one ear to be overlooked or neglected, until the sound one has also become affected. As a remedy for all this, the author insists on very careful attention to the primary disease, with local or general treatment if necessary, and considers it important that the case should remain under observation until recovery is perfect, or as nearly so as the particular disease will admit. The author considers that, if more attention were paid to the degree of deafness in the earlier stages of tympanic disease, there would be much less of the incurable secondary processes. The importance, and the methods, of applying simple tests for the hearing should be known to every practitioner. For this purpose the author advocates the use of the voice and watch, and gives a few practical instructions on the subject.

E. CRESSWELL BABER, M.B.

4. *Reynolds on Perforation of both Tympanic Membranes by Ascaris Lumbricoides.*—A singular case is reported by Mr. Lewis W. Reynolds in the *Lancet*, October 1880, p. 653, of a woman, aged 35, who was subject to worms. After taking two santonine powders, intense ear-ache set in, and a worm protruded from each ear; the same day two more came away from the left, and one from the right, ear. Subsequently, at intervals of two and three days, two more were drawn out by her husband, the last being four inches long, and of the size of a small goose-quill. Each day a large number passed *per anum*. Several months subsequently, a large perforation existed in the membrana tympani of each side, but the sense of hearing remained perfect. [In the *Medical Digest*, section 1793-5, a case that occurred in the practice of the late Mr. James Yearsley, is referred to. It was that of a child who had long suffered from severe ear-ache, which was treated by poultices. One night its screams were terrific, but suddenly ceased; in the morning, an ascaris lumbricoides, six inches long, was found in the poultice.] RICHARD NEALE, M.D.

ORTHOPÆDIC SURGERY.

RECENT PAPERS.

1. ADAMS, W.—On the Treatment of Lateral Curvature of the Spine by Steel Supports, Plaster-of-Paris Jackets, and Poroplastic Jackets. (*Brit. Medical Journal*, May 29, 1880.)

2. ATKINS, Dr. T. G., and others.—Poroplastic Splints. (*Ibid.*, August 30, 1879.)

3. ALLEN, W.—On the Anatomical Changes induced at the Elbow by Luxation backwards of the Head of the Radius in Early Life. (*Glasgow Med. Jour.*, July 1880.)

4. AYSAGUER. — Osteoclasy in Rachitic Curvatures. (*Le Progrès Médical*, 1879.)

5. BAKER, H. F.—Treatment of Genu Valgum without Division of Bone. (*British Medical Journal*, May 22, 1880.)

6. BAKER.—Treatment of Congenital Talipes Equino-Varus after Infancy. (*Lancet*, May 3, 1880.)

7. BARWELL, R.—Section of the Femur above the Small Trochanter for Angular Ankylosis of the Hip. (*Medical Times and Gazette*, vol. i, p. 570, 1880.)

8. BOECKEL, JULES.—New Observations upon Osteotomy in Rachitic Curvatures of the Limbs. (Paris: Baillière, 1880.)

9. BORNHAUPT.—On the Use of Sayre's Jacket. (*Centralblatt für Chirurgie*, No. 40, 1880.)

10. BRADFORD, E. H.—A Case of Posterior Torticollis, treated successfully by Delore's Method. (*New York Med. Journal*, Jan. 1880.)

11. BRADFORD, E. H.—Treatment of Pott's Disease by the Plaster-of-Paris Jacket. (*Boston Med. and Surg. Journal*, May 13, 1880.)

12. BRYANT, T.—The Value of Parallelism of the Lower Extremities in the Treatment of Hip-Disease and Hip-Injuries; with the best means of maintaining it. (*Lancet*, Jan. 31, 1880.)

13. BRUNS, P. — Supracondylar Osteotomy of the Femur in Genu Valgum. (*Centralblatt für Chirurgie*, No. 24, 1880.)

14. BUCKLEY, S. W.—A Case of Cervical Caries. (*British Medical Journal*, April 3, 1880.)

15. BUSCH, F.—The Deformities of the Joints produced by Pressure. (Schencke: Berlin, 1880. Reprint of Clinical Lectures in *Berliner Klinische Wochenschrift*, 1879-80.)

16. CHARTERIS, M.—Erb's Spastic Paralysis. (*Lancet*, May 29, 1880.)

17. CLARKE.—The Normal Length of the Condyles of the Femur. (*British Medical Journal*, April 24, 1880.)

18. CLARKE.—Disease of the Spine without Curvature. (*British Medical Journal*, April 1880.)

19. CROLY.—Spinal Abscess. (*British Med. Journal*, May 8, 1880.)

20. DEL GRECO, C.—Severe Rachitic Curve of the Leg cured by Fracture. (*Gazz. Med. Ital. Lombardia*, Oct. 2, 1880.)

21. DEWITT, W. H.—Talipes Equinus in consequence of Malarial Infection. (*Cincinnati Lancet*, No. 16, 1879.)

22. DOYLE.—Apparatus for Inversion of Foot. (*New York Medical Record*, 1880.)

23. DUBREUIL.—Lectures on Clinical Orthopædic Surgery. (Montpellier, 1880.)

23A. DUBREUIL.—Painful Flat-foot, etc. (*Gazette Médical de Paris*, No. 38.)

24. FAGAN, J.—A Simple and Cheap Splint for Extension of Contracted Wrist and Fingers. (*British Medical Journal*, May 22, 1880.)

25. FARABEUF. — Experiments on the Dead Subject, illustrating Delorè's 'Redressement forcé'. (*Gaz. Méd. de Paris*, Jan. 3, 1880.)

26. GAY, C. C. F.—Refracture for the Correction of Deformities from Malunion of Bone. (*Philadelphia Med. Gazette*, Feb. 14, 1880.)

27. GOSSELIN.—Psoas Abscess with Spontaneous Separation of the Epiphysis. (*Gazette des Hôpitaux*, No. 72 1879.)

28. GRATTAN, N.—Splint for Contracted Knee-Joint. (*Lancet*, 1880, vol. i, p. 949.)

29. GUÉNEAU DE MUSSY, NOEL.—On Sayre's Method. (*L'Union Médicale*, No. 17, 1880.)

30. HAMILTON, A. M'L.—The Physiological Treat-

ment of Wryneck. (*New York Medical Journal*, Feb. 1880.)

31. HEMSTED, E.—Application of Plaster-of-Paris Bandages. (*British Medical Journal*, Feb. 7, 1880.)

32. HOLL, M.—Contributions to the Surgical Osteology of the Foot.—(*Archiv für Klin. Chir.*, Band xxv, Heft 1.)

33. HUNTER, C. T.—The Leather Jacket in the Treatment of Spinal Curvature. (*Boston Medical and Surgical Journal*, June 17, 1880.)

34. JENNINGS, O.—On the Mechanical Treatment of the Affections of the Vertebral Column. (Paris: Baillière, 1880.)

35. JOESSEL.—On Relapses after Dislocations of the Humerus. (*Deutsche Zeitschrift für Chirurgie*, June 1880.)

36. KESTEVEN, W. H.—Notes of Cases of Spinal Disease treated by Dr. Sayre's Method. (*Lancet*, July 5.)

37. KILGARIFF, M.—Osseous Ankylosis of the Knee, operated on by Barton's Method. (*Dublin Journal of Medical Sciences*, March 1880.)

38. KÖNIG.—On the Advances in the Treatment of Pott's Curvature. (*Centralblatt für Chirurgie*, No. 32, 1880.)

39. KÖNIG.—The Treatment of Club-Foot by Excision of a Wedge of Bone from the Dorsum of the Foot. (*Centralblatt für Chirurgie*, Band vii, No. 13.)

40. KÜSTNER.—A Case of well-marked Congenital Genu Valgum. (*Archiv für Klin. Chir.*, Band xxv, Heft 3.)

41. KUSTNER, OTTO.—Upon the Frequency of Congenital Flat Foot, with Observations upon the Form of the Foot in New-born Children generally. (*Archiv für Klin. Chir.*, Band xxv; and *Wiener Med. Wochensc.*, No. 31.)

42. LANGE, F.—Remarks on the Treatment of Cold Abscesses, especially in connection with Pott's Disease. (*New York Medical Journal*, May 1880.)

43. LUC, H.—Upon Contractions of Traumatic Origin.

44. LÜCKE.—Upon the Treatment of Club-Foot. (Betz's *Memorabilien*, Band xxv, p. 370.)

45. MACEWEN.—On Osteotomy, with an Inquiry into the Etiology and Pathology of Knock-Knee, Bow-Legs, and other Osseous Deformities of the Lower Limbs. (J. and A. Churchill.)

46. MACEWEN.—Osteotomy for Genu Valgum: Death from Diphtheria. (*British Medical Journal*, April 24, 1880.)

47. MCPHAIL.—Specimen of Talipes Equinus. (*Brit. Medical Journal*, April 24, 1880.)

48. MARGARY, F.—Genu Valgum: McEwen's Operation; Excellent Result. (*Lo Sperimentale*, May 1880.)

49. MARGARY, F.—Double Genu Valgum: Billroth's Operation: Complete Cure. (*Osservatore*, 1880, No. xvi.)

50. MEYER, W.—The Treatment of Skoliosis according to Sayre's principles, but with the Felt Jacket. (*Centralblatt für Chirurgie*, No. 40, 1880.)

51. MIKULICZ, J.—Lateral Curvatures at the Knee; and the Methods of Treating them. (*Archiv für Clin. Chir.*, Band xxiii.)

52. MIKULICZ, J.—On the Operations on the Femur for Genu Valgum. (*Ibid.*)

53. MURALT, W. V.—Upon the Orthopædic Treatment of Curvature of the Vertebral Column. (*Schweizer Correspondenz Blatt*, Band x, 1880.)

54. ORMSBY, L. H.—On Cocking's Poro-Plastic Jackets. (*Medical Press and Circular*, Oct. 15.)

55. OWEN, EDMUND.—Lectures on Certain Practical Points in Connection with the Diseases of Childhood, including Genu Valgum, etc. (*British Medical Journal*, Feb. 21, 28, 1880.)

56. PARKER, R. W.—The Treatment of Spinal Disease by Sayre's Method. (*Med. Times and Gazette*, July 19.)

57. PARONA, F.—Cases of Talipes Valgus cured by Osteotomy.

58. PIPINO, W. C.—On the Treatment of Club-Foot by Continuous Elastic Extension. (*St. Louis Med. Journal*, 1880.)

59. POINSOT.—On Resection of the Tarsus, or Tarsotomy, for Club-Foot of long standing. (*Mem. de la Soc. Chirurgie de Paris*, volume vi, 1880.)

60. POORE, C. T.—The Cause and Treatment of Genu Valgum. (*New York Medical Record*, May 22, 29, 1880.)

61. POST, A. C.—On Certain Unusual Deformities of Fingers and Toes. (*Medical Gazette*, Feb. 1880.)

62. PROUST and BALLET.—Muscular Atrophy in a Case of Pott's Disease. (*Revue Mensuelle de Médicine et de Chirurgie*, June 10, 1880.)

63. REUSS, L. M.—On Osteotomy in Rickety Curvature of Bones: Boeckel's Method. (*Journal de Thérapeutique*, June 10, 1880.)

64. RIED.—The Treatment of Severe Club-Foot by Resection. (*Deutsche Zeitschrift fur Chirurgie*, June 1880.)

65. ROCHELT.—Upon making Fenestrated Plaster-Cases. (*Wiener Med. Blätter*, No. 39, 1879.)

66. ROHMER, J.—The Variations in the Normal and Pathological Forms of the Sole of the Foot, studied by the Graphic Method. (Paris: 1880.)

67. RUGGI.—The Pathology of Talipes Varus arising in Inflammation of the Astragalo-Calcaneal Joint. (*Bullettino delle Scienze Mediche de Bologna*, vol. iv, 1879; and *Centralblatt für Chir.*, No. 28, 1880.)

68. RUPPRECHT, P.—Cases of Wedge-Resection of the Tarsus for Congenital Club-Foot. (*Clin. Centralblatt*, No. 7.)

69. SAYRE, L. A.—Pott's Disease. (*Boston Medical and Surgical Journal*, Jan. 1, Feb. 12, April 1, 22, Jun. 3, 17.)

70. SMITH, MARY.—Upon Fœtal Rachitis. (*Jahrbuch fur Kinderheilkunde*, Band xv, Heft 1, 1880.)

71. STEELE, C.—Chair-Supports in Spinal Curvature. (*British Medical Journal*, June 5, 1880.)

72. STILLMANN.—Continuous Extension in Spinal Curvature: a question of priority. (*Medical Society of County of New York*, Meeting, Feb. 22.)

73. STILLMANN.—Contributions to Orthopædic Surgery. (*Ibid.*, Aug. 30.)

74. TERRILLON.—Report upon M. Beauregard's Communication concerning Osteotomy for Genu Valgum. (*Gaz. Méd. de Paris*, Jan. 3, 1880.)

75. VANCE.—A Removable Paper-Brace for the Treatment of Pott's Disease and Lateral Curvature. (*New York Medical Record*, June 21.)

76. VOGT, PAUL.—A Contribution to the Science of Orthopædic Mechanism. (*Archiv für Kinderheilkunde*, Band i, 1880.)

77. VOLKER.—Osteoplastic Resection of the Elbow-Joint. (*Deutsche Zeitschrift für Chir.*, Feb. 16, 1880.)

78. WALTON, H.—Two Cases of Bony Ankylosis of the Elbow-Joint treated by Subcutaneous Osteotomy of the Lower End of the Humerus: Union in a useful position. (*Lancet*, April 3, 1880.)

79. WEIL.—On Chiselling through the Tibia and Fibula for Genu Valgum.

80. WEST, F. J.—On Sayre's Treatment of Spinal Affections. (Birmingham: 1880.)

81. WITTELSHÖFER.—The Treatment of Spinal Curvature by means of Rigid Bandages. (*Wiener Med. Wochenschrift*, No. 20, 1880.)

82. WOOD, J.—Remarks on the Employment of Double Extension in Cases of Disease and Injuries of the Spine and Pelvic Joints. (*Brit. Med. Journal*, June 5, 1880.)

83. WYETH, J.—The Treatment of Spinal Curvature by Continuous Extension. (*Medical Society of the County of New York*, Jan. 27th.)

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1. *Adams on Treatment of Lateral Curvature of the Spine by Steel Supports, etc.*—Mr. W. Adams, in a paper read before the Royal Medical and Chirurgical Society (*British Medical Journal*, May 29, 1880), considers the plaster jacket useless, if not injurious, in cases of lateral curvature. He states that the gain in height by suspension is quickly lost. Commencing structural curves form the only curable cases of lateral curvature; and for these are recommended a combination of mechanical support, gymnastic exercises, and partial recumbency.

3. *Allen on the Anatomical Changes induced in*

the Elbow by Luxation Backwards of the Head of the Radius in Early Life.—Dr. Allen's paper (*Glasgow Medical Journal*, July 1880) is of great interest in connection with the pathology of such deformities as genu valgum. The head of the radius and the external condyle of the humerus, being released from their normal mutual pressure, grew, the former three-fourths of an inch, the latter half an inch. He quotes more or less similar cases from R. Adams (2), Dupuytren (2), and Cruveilhier (2). Adams and Dupuytren considered the deformity congenital. Allen discusses the origin of his case, and is inclined to agree with them, but not unreservedly. His concluding words are: 'It still requires the aid of experiment, before it can be laid down as a definite law that the growth of a bone is checked by the pressure of neighbouring ones.'

8. *Boeckel upon Osteotomy in Rachitic Curvatures.*—M. Boeckel quotes 181 cases, of which the author operated on sixteen himself. His conclusions are eminently favourable to the operation.

9. *Bornhaupt on Sayre's Jacket.* — Bornhaupt's paper, read at the sixth meeting of Russian Naturalists and Physicians, contains an analysis of thirty-eight cases treated in Russia, with Sayre's jackets (twenty-three angular, and fifteen lateral, etc., curvature).

19. *Croly on Lumbar Abscess.*—In Mr. Croly's case (*British Medical Journal*, August 8, 1880) a lumbar abscess burst 'on to the surface of the spinal membranes', and was quickly fatal. The complication was diagnosed during life.

21. *Dewitt on Talipes Equinus from Malarial Infection.*—In this case (*Cincinnati Lancet*, No. 16, 1879) the patient was a boy, aged 16. Contraction occurred daily, like the fever from which he was suffering, and was completely cured by quinine.

35. *Farabeuf on Delore's Method of Forcible Reduction.*—M. Farabeuf (*Gazette Médicale de Paris*, Jan. 3, 1880), by experiments on the dead body, has established the fact that, in forcibly straightening a genu valgum, the epiphysis was separated. The joint was not opened, and the ligaments were intact. The periosteum was separated to a considerable height. The fibula was uninjured.

51. *Mikulicz on the Pathology of Genu Valgum.*—Mikulicz's splendid monograph marks an era in the history of the pathology of genu valgum. It is a remarkable feat to produce 170 pages of hard facts, tempered with a small quantity of well-argued theory, respecting a disease which has for centuries been regarded as so simple as scarcely to deserve two sentences in many text-books of surgery. It is more astonishing to find such an essay interesting. But what makes the monograph really remarkable, is that it effects a revolution in the pathology of knock-knee. As an assistant to Billroth at Vienna, Mikulicz has enjoyed rare opportunities for observation. In the last ten years, he has thus seen and precisely followed the results of treatment of 54 cases of genu valgum, and 11 of genu varum. The total of completely and incompletely observed cases in that period is, however, 174. He has, moreover, examined anatomically 17 specimens of genu valgum and 2 of genu varum, all from adult or adolescent subjects. He gives elaborate tables and descriptions of the conditions found, besides several plates and woodcuts. It is quite clear that the deviation in genu valgum is due, not to an overgrowth of the internal condyle, but partly to the condyles being pushed downwards by an unequal one-sided growth of the lower end of the femoral diaphysis, partly to a similarly unequal growth of the upper end of the tibial diaphysis, and partly to curvatures of both the diaphyses. Genu varum is produced in a similar manner, though, of course, with the conditions reversed laterally. The primary condition which renders certain people liable to these deformities, is an affection of the so-called epiphysal cartilage, in nature similar to rachitis. Hence it may be named 'rachitis adolescentium'. In almost all the anatomical preparations were observed osteophytes. The phenomena described will be recognised by a glance at the plates opposite p. 670. By these observations, Ogston's operation stands theoretically condemned. Mikulicz, in another paper, expresses himself more favourably concerning Reeves's modification of Ogston's plan, as being more easy to execute and less dangerous. But his sympathies are, as might have been expected, both from his pathological studies and his relations to Billroth, in favour of Billroth's plan of chiselling through the tibia, and of other operations based on the same principles. Hence, when, towards the close of the second essay, it is stated that 'Barwell has announced himself in favour of Macewen's and Chiene's operation', the reader thinks that Dr. Mikulicz has practically done the same. Since 1872, there have been sent out of Billroth's wards 31 cases of osteotomy for genu valgum, of which 17 had been treated by Lister's antiseptic plan. In all these 17, the wound healed by first intention.

63. *Reuss on Lister's Method in Osteotomy.*—M. Reuss (*Journal de Thérapeutique*, June 1880), begins with an emphatic tribute to the services to modern surgery done by Lister's antiseptic methods. According to Boeckel, osteotomy for rachitic cases, far from being 'barbare comme l'ostéoclasis', is inoffensive. In rachitis, while the bones are still soft, osteoclasis should be used; but when the period of eburnation has arrived, the proper treatment is osteotomy. Is there a limit of age beyond which osteoclasis is no longer possible? Strictly speaking, no; Billroth having, by operation, straightened the leg of a chiid, aged 4, the rachitic process afterwards curved the limb again below the seat of operation. On the other hand, Volkmann often found, even in children only 2½ years old, the bones so hardened that he could not force them straight.

66. *Smith on Fœtal Rachitis.*—Dr. M. Smith's is a most elaborate monograph on the subject of fœtal rachitis, crowded with facts and measurements, many of great interest.

70. *Terrillon on Osteotomy and Osteoclasis.*—M. Terrillon (*Gazette Méd. de Paris*, June 1880), comparing the two chief operative treatments of genu valgum, viz., osteotomy and osteoclasis (Delore's), says that the latter seems to be less dangerous, and that the fragments unite more quickly after Delore's operation than after osteotomy. In the case of powerful, thick-set patients, Collins' apparatus should be used. He says, 'I have made, with this apparatus, some observations upon the dead body in "l'amphithéâtre des hôpitaux", and before those of M. Farabeuf. Here are the results of my observations: I have experimented upon two subjects, each aged 18 years, strong and firm. I have made the straightening on the one hand by gentle and gradual traction; and, on the other, by forcible (brusque) straightening. The appearances were identical. They were as follow: either absence of injury or else mere stretching of the ligaments, separation of the periosteum of the femur on the outer side, and a slight posterior tearing of the

external condyle at the level of the termination of the diaphysis, the cartilage remaining adherent to the condyle. On the side of the internal condyle, beneath the cartilage, was crushing of the osseous substance, sinking of that substance ; the periosteum was intact at this point. This result differed from that observed by M. Farabeuf, who saw the complete separation of the line of (epiphysial) union. Upon one of the limbs in which I produced a smart jerk and heard a cracking noise, a dry crepitus, there was separation of the head of the fibula. Where I had proceeded gently, without eliciting a cracking noise, there were the same lesions. It will be noticed that there was separation of the periosteum always on the outer surface of the femur. At the level of the joint there were some rents at the points of attachment of the ligaments.' In the course of this paper it is noticed that, in France, osteotomy is comparatively little practised, except by a few surgeons, *e.g.*, Boeckel of Strasburg, and Beauregard of Havre. Delore's treatment is the favourite.

75. *Weil on Chiselling through the Tibia and Fibula for Genu Valgum.*—Weil records two cases of death from chiselling through the tibia and fibula for genu valgum, in spite of antiseptic treatment. One died of acute septicæmia ; one, five months after the operation, from suppuration of the fibular wound. Observations upon the anatomical preparations confirmed the statements of Mikulicz. Before the end of the period of growth, Weil trusts to gradual extension, or when this is impracticable, forcible extension. After the period of growth, he recommends, for slight cases, subcutaneous osteotomy; for bad cases, operations like those of Chiene, McEwen, and Billroth.

77. *Wittelshöfer on Sayre's Poroplastic Jackets.*—Dr. Wittelshöfer (*Wiener Med. Wochenschrift*, Band xx, 1880), after stating that Sayre's jackets have not been employed sufficiently long in Billroth's clinic to permit definite conclusions as to final results, proceeds to bear strong testimony to the immediate effects in cases both of lateral and angular curvature, and he thinks that these effects alone justify the employment of plaster-of-Paris in many cases.

C. B. KEETLEY.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

1. BUCCOLA and SEPILLI.—On Modifications of Sensation, caused by Æsthesiogenic Agents. (*Rivista Sperimentale di Freniatria e di Medicina Legale*, Anno vi, Fascicolo i° e ii°.)

2. MONTI.—Contribution to Cerebral Localisations. (*Ibid.*)

3. TASSI, EUGENIO.—Cases of Lesion of the Psycho-motor Centres. (*Ibid.*)

4. GOWERS, W. R.—Illustrations of the Diseases of the Pons Varolii. (*Brain*, January 1880.)

5. MILLS, C. K.—Cases of Disease of the Brain, etc. (*Ibid.*)

6. WARNER, F. and BEACH, F.—A Case of Hemiplegia due to Wasting of Cerebral Convolutions. (*Ibid.*)

7. DUCKWORTH, D.—A Plea for the Neurotic Theory of Gout. (*Brain*, April 1880.)

8. DUNCAN, JOHN.—On the Paralysis which results from Angular Curvature of the Spine. (*Ibid.*)

9. BUZZARD, THOS.—On some Varieties of Cervical Paraplegia. (*Ibid.*)

10. BASTIAN, H. C. and HORSLEY, V.—Arrest of Development in the left Upper Limb, in Association with an extremely small Right Ascending Parietal Convolution. (*Ibid.*)

11. MCLEOD, K.—Case of Nerve-Splitting. (*Ibid.*)

12. ROSS, JAMES. — Cases of Intracranial Tumour. (*Brain*, January and April 1880.)

13. MCALDOWIE, A.M.—Case of Alternate Hemiplegia, with Conjugate Deviation of the Eyes. (*Brain*, April 1880.)

14. FERRIER, D.—Crural Monoplegia:—Limited Cortical Lesion of Opposite Hemisphere. (*Ibid.*)

15. OGLESBY, R. P.—Nystagmus. (*Brain*, July 1880.)

16. JACKSON, J. HUGHLINGS.—On Right- or Left-Sided Spasm at the Onset of Epileptic Paroxysms, etc. (*Ibid.*)

17. IRELAND, W. W.—Notes on Left-Handedness. (*Ibid.*)

18. FOX, A. W. and FIELD, E.—Case of Cerebral Tumour. (*Ibid.*)

19. ECHEVERRIA, M. G.—Marriage and Hereditariness of Epileptics. (*Journal of Mental Science*, October 1880.)

20. DRESCHFELD, J. — On the Application of the Electro-Magnet for the Cure of Anæsthesia. (*British Medical Journal*, August 7, 1880.)

21. JAMES, J. B.—Epilepsy. (*Ibid.*, Sept. 18, 1880.)

22. PITTS, H. Y.—Tremors in a Child, resembling Paralysis Agitans. (*Ibid.*, Oct. 2, 1880.)

23. ATKINSON, G. P.—Treatment of Brain-Affection in Typhoid Fever by Counter-Irritation. (*Ibid.*, Oct. 16, 1880.)

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1. *Buccola and Sepilli on Metalloscopy and Metallotherapy.*—These authors have an elaborate article in the *Rivista Sperimentale di Freniatria edi Medicina Legale*, Anno vi, Fascic. 1 and 2. They give the results of experiments made by them to ascertain the modifications of sensation produced by electric currents, magnets, metals, vesicants, mustard leaves, cutaneous etherisation (*a*) under physiological conditions, and (*b*) under pathological conditions. The various theories which have been propounded as to the manner in which these æsthesiogenic agents modify sensation, are also discussed. The chief of them are the electric, the vascular, and the molecular theories, the theory of bilateral function, and that of expectant attention. This last, which has been advocated almost exclusively by English writers, is strongly combated by the authors; they have obtained decisive results from the application of metals in patients whose mental condition was such that there was no possibility of any psychic effect being produced by the treatment. The opinion is finally expressed, that every one of the above theories has the defect of being too one-sided, and can therefore not be adapted to the explanation of all the facts of metalloscopy. Contradictory arguments are to be found in each theory. In the present state of our knowledge, it is impossible to formulate a general theory which shall explain clearly all the singular phenomena which are now universally admitted to exist.

2. *Monti on Cerebral Localisation.*—The author relates (*Rivista Sperimentale di Fren. e di Med. Leg.*, Anno vi, Fasc. 1 and 2) an interesting case of paralysis of speech, with right hemiplegia and contracture. After death, softening was found in the first, and the posterior part of the third, left frontal convolutions ; the seat of an old apoplexy was seen in the left caudate nucleus, and there was partial atrophy of the whole of the left cerebral and cerebellar hemispheres, with cortical lesions in the parietal region.

3. *Tassi on Lesions of the Psycho-motor Centres.*—Two illustrative cases are detailed (*Rivista Sperimentale di Fren. e di Med. Leg.*, Anno vi, Fasc. 1 and

2). The first was one of fracture of the frontal bone, followed, after an interval of twenty days, by sudden hemiplegia and aphasia: trephining of the skull a month after the injury resulted in complete recovery. The second case was one of embolism of the right Sylvian artery, and softening of the motor zone, verified by *post mortem* examination. The symptons observed during life were epileptic convulsions and paralysis of the left side, accompanied by aphasia. The author relates this case in support of the view that the centre presiding over speech is not to be looked for solely in the third left frontal convolution, but also in the corresponding gyrus of the right side. [It would be interesting to know if the patient were left-handed.—*Rep.*]

6. *Warner and Beach on Hemiplegia due to Wasting of Cerebral Convolutions.*—This case is related by the authors in *Brain*, January 1880. The patient was twenty-one months old, and presented the following congenital defects; Bell's paralysis, associated with disease and deformity of the right ear, congenital cyanosis, and left hemiplegia. After death from bronchitis, it was found that parts of the right ascending frontal and parietal, the whole of the supramarginal with its lobule, and part of the temporo-spenoidal convolutions, were shrunken, 'wasted', or at any rate wanting. Adventitious cavities occupied the situations of the defective gyri. The authors say that neither of these cavities appeared to be a serous or blood-cyst, or the sac of an abscess. They consider, however, that the left hemiplegia existing at birth was due to intra-uterine wasting of the convolutions described, resulting from disease of the brain. [Is it not more probable that the defective convolutions were never properly developed? The lesions observed would thus be regarded as due to an arrest or defect in development, and not to wasting as a result of inflammatory or other disease.—*Rep.*]

7. *Duckworth on the Neurotic theory of Gout.*—In the April number of *Brain*, Dr. Dyce Duckworth contends that gout is a primary neurosis; that diseased conditions, recognised as of a gouty nature, are primarily dependent upon a functional disorder of a definite tract of the nervous system, probably situate in the medulla oblongata, where a trophic centre for the joints may exist.

8. *Duncan on Paralysis from Angular Curvature.*—The author distinguishes (*Brain*, April 1880) two forms of vertebral caries. The first or constitutional form is rapid in its progress, but rarely accompanied by paralysis, or, if so, this is due to pressure on the spinal cord. The second or traumatic form is slow in progress, but paralysis appears early (often before any deformity has arisen) and specially affects the motor tract of the cord, presenting the usual characters of what has been termed 'pressure-myelitis'. This paralysis may often be cured by rest and counter-irritation. Two series of cases are given to illustrate the distinction drawn between the two forms of disease.

11. *McLeod on Nerve-Splitting.*—The case is related (*Brain*, April 1880) of a man who had an abscess of long standing in the ulnar nerve above the elbow. The thickened texture of the nerve constituted the walls of the abscess, which had discharged externally through a sinus for five years. The nerve was slit up for over four inches of its length, the lining membrane of the cavity was scraped off, and the nerve was then split in two from before backwards, the division following as far as possible the direction of the fibres, and being prolonged into the comparatively sound nerve-tissue above and below. Antiseptic precautions were used throughout, and satisfactory results were noted three weeks after the date of operation.

16. *Jackson on the mode of Commencement of Epileptic Paroxysms, etc.* In *Brain*, July 1880, Dr. Hughlings-Jackson insists on the desirability of studying the modes of commencement of epileptic paroxysms, with a view to ascertaining in what part of the brain the discharging lesion is situated. It is rare for the spasm of an epileptic fit to be equal and contemporaneous on the two sides of the body at its onset. Each different epilepsy should be studied as distinguished by its particular warning; the warning, being simply the first result from, or during, the central discharge, is the thing of most localising value. The author's observations lead him to the belief that when an attack of epilepsy starts by vertigo, in the sense of there being apparent movement of objects to one side, the first part of the convulsion is usually right-sided, and external objects appear to be displaced to the right. Such vertigo would signify discharge of some part of the left cerebral hemisphere. After a 'warning' of smell, epigastric sensation, or masticatory movements, the first spasm is usually on the left side. Temporary aphasia is more frequently observed after epileptic seizures which start by vertigo, and in which the 'discharging lesion' is believed to be in the left cerebral hemisphere. In cases of 'warnings' by crude developments of the objective sensations, sight and hearing, the side first in spasm is usually, but not always, the left. The fact of a patient's being left-handed frequently explains an apparent departure from the rules just indicated. Considerable attention is paid by the author to the 'dreamy feeling', 'double consciousness', 'feeling of being somewhere else,' which sometimes precedes a fit, and has been described as an 'intellectual aura'. This elaborate mental state mostly occurs with the subjective warning-sensations—smell, epigastric sensation, supposed gustatory movements, and sometimes spitting. It cannot be owing to an epileptic discharge, being far too elaborate in its nature; the author thinks it is due to a slightly raised activity consequent on 'loss of control' of healthy nervous arrangements, possibly in the cerebral hemisphere opposite the one (believed to be nearly always the right) in which the discharge begins.

17. *Ireland on Left-handedness.*—The author (*Brain*, July 1880) critically examines Mr. Charles Reade's view that the left hand is naturally as readily used as the right, but that inveterate custom has led men to give an arbitrary preference to the right. Dr. Ireland finds, by observations upon a number of idiotic children and healthy children, that left-handedness is not more frequent with imbeciles than with normal children. But the cases amongst the imbeciles were much more decided in their left-handedness. Among imbeciles, moreover, there is a class, as numerous as the left-handed, who use both hands indiscriminately; so that there is a much smaller percentage of children who are decidedly right-handed among imbeciles, than among normal children. As idiot children are much less tractable than others, and it is much more difficult to teach them to use their right hands, these observations appear to support Mr. Reade's theory. Luys has stated that the left hemisphere at birth is several grammes heavier than the right. It is certain that the contour of the adult skull is rarely symmetrical; most people are left-headed and right-handed. The majority of imbeciles found by Dr. Ireland to be

right-headed were either left-handed, or belonged to the indiscriminate class. Some may hold that this one-sided development of the brain is really the consequence, and not the cause of right-handedness; but the view that the habitual preference of the right arm really arises from a greater or earlier innate power in the left hemisphere, seems strengthened by the well known facts of aphasia. The left-sidedness of the brain in this case is certainly beyond the reach of mothers and teachers, and cannot be said to be due to education or 'arbitrary preference'.

19. *Echeverria on Marriage and Hereditariness of Epileptics.*—In an interesting paper in the *Journal of Mental Science*, October 1880, Dr. Echeverria brings forward numerous facts which throw discredit upon the ancient, but now exploded, doctrine that venery cures epilepsy developed at the age of puberty. In accordance with this view, physicians have frequently recommended epileptic patients to marry. In the present paper will be found a mass of evidence showing that, in the vast majority of cases, the results are most disastrous, both to the parties themselves and to the offspring. The hereditary transmission of epilepsy from parent to child, which has been strongly insisted upon by Portal, Beau, Moreau, Trousseau, Foville, Voisin, and many others, has been rejected by Tissot, Morel, Delasiauve, and a few more. The sufficiently weighty evidence already accumulated by the first-named party is now further strengthened by figures given by Dr. Echeverria, relative to the health of all the members of 134 families (553 individuals) the offspring of epileptic parents. In the early part of his paper, the author gives a historical *resumé* of cases in which epilepsy or its accompaniments have been held to prohibit or annul marriage by legal or ecclesiastical authorities.

20. *Dreschfeld on the use of the Electro-Magnet in Anæsthesia.*—Three cases are related (*Brit. Med. Journal*, August 7, 1880) as follows:—1. Hysterical anæsthesia affecting both sides of the body, and also the special sense organs: 2. Partial epilepsy, most probably of syphilitic nature; anæsthesia: 3. Left hemiparesis, with involuntary movements of arm and leg; left hemianæsthesia; left hemianopsia; mental disturbances. The immediate effect of the electro-magnet in all the three cases is reported as very striking. In the first case, the application was so conducted that there could be no deception on the part of the patient; the second case closely resembles cases of meningeal syphilitic inflammation; in the third case there can be no doubt as to the presence of organic lesion. The anæsthesia in the second case might have been cured by the prolonged administration of iodide of potassium; and in the third case it might have gradually diminished, but the sudden effect produced by the magnet is specially interesting from a physiological point of view. Negative results were obtained from the use of the magnet in two cases of progressive muscular atrophy, accompanied by analgesia without anæsthesia, also in lesions of peripheric sensory nerves. It seems, therefore, that the magnet is only of use in cerebral cases, and would thus be of diagnostic value in doubtful cases.

21. *James on the Cure of Epilepsy.*—A short case is related (*British Medical Journal*, Sept. 18, 1880) and the opinion is expressed that epilepsy can not only be checked for a time, but its recurrence entirely prevented, by continuing the use of bromide of potassium for a period of at least three months after the cessation of paroxysmal symptoms, a brisk purgative being also occasionally administered.

22. *Pitts on Tremors resembling Paralysis Agitans, occurring in a Child.*—The case is related (*Brit. Med. Journ.*, Oct. 2, 1880) of a boy, aged 8 years, who was daily affected with 'shivers', lasting about half an hour, and followed by flushing and sweating. Some months later, they became far more frequent. Once they continued for four days, almost without intermission, except when sleep was induced by chloral. The tremor of the arms and legs exactly resembled the movements of paralysis agitans, attended with slight subsultus tendinum. The patient was quite conscious, and tried to restrain the movements. Chloral-hydrate was given at bed-time, a preparation of iron during the day, and a Pulvermacher's chain of 120 links was worn for an hour daily. The tremors ceased almost suddenly, and some weeks later they had not returned.

23. *Atkinson on Counter-irritation in Typhoid Fever.*—Believing in the principle of elimination in the treatment of typhoid fever, the author (*Brit. Med. Journ.*, October 16) commences by using emetics and calomel purgatives. Epigastric pain or tenderness is treated at once by producing a blister in that region. This is believed to prevent or relieve the delirium which usually quickly follows the epigastric trouble. CHAS. S. W. COBBOLD, M.D.

PHYSIOLOGY.

CIRCULATION.

RECENT PAPERS.

1. ARISTOW, AD.—The Influence of Rapid Changes of Temperature on the Heart. (*Archiv für Anat. und Phys.; Phys. Abtheilung*, 1879, p. 198.)

2. DISSE, J.—The Origin of the Blood and of the First Blood-Vessels in the Egg of the Hen. (*Archiv für Mikr. Anat.*, Band xvi, p. 545.)

3. MARCHAND, R.—Experiments on the Behaviour of Nerve-Centres as regards External Irritation. (Pflüger's *Archiv*, Band xviii, p. 511.)

4. SAMUELSON, B.—On the Influence upon the Heart's Action of Closure of the Coronary Arteries. (*Centralblatt für die Med. Wiss.*, 188, p. 209.)

5. GRÜTZNER, P.—Observations on the Heart of a Woman, which had been laid Bare by an Operation. (*Breslauer Aerztl. Zeitsch.*, 1879; and *Centralblatt für die Med. Wiss.*, 1880, p. 234.)

6. ARNDT, R.—Observations on the Red Blood-Corpuscles of the Vertebrata. (Virchow's *Archiv*, Band lxxviii, p. 1.)

7. ARNDT, R.—On the Contractility of Red Blood-Corpuscles. (Virchow's *Archiv*, Band lxxviii, p. 524.)

8. RINGER AND MORSHEAD.—On the Relative Paralysing Action of Atropin and Pilocarpin on the Heart. (*Journal of Physiology*, vol. ii, p. 235.)

9. BURDON-SANDERSON AND PAGE.—On the Time-Relations of the Excitatory Process in the Ventricle of the Heart of the Frog. (*Ibid.*, vol. ii, p. 384.)

10. FRANÇOIS-FRANCK.—Historical and Critical *Exposé* of the Researches Regarding the Rapidity of the Blood-Current. (*Journal de l'Anatomie et de la Phys.*, Mars, Avril 1880.)

11. WALDENBURG, L.—On the Measurement of the Pulse and Blood-Pressure in Man. (Hirschwald, Berlin, 1880.)

12. RINGER, SYDNEY.—On the Antagonisms of Aconitia on the Heart of the Frog. (*Journal of Physiol.*, vol. ii, p. 436.)

13. MOOREN AND RUMPF.—On Vascular Reflex in the Eye. (*Centralblatt für die Med. Wiss.*, 1880, p. 337.)

14. LAFFONT.—On the Excitability of the Depressor Nerve before Irritation of the Fourth Ventricle, and at

Different Intervals of Time after that Operation. (*Progrès Méd.*, April 1880.)

15. WOOD AND REICHUT.—Note on the Action upon the Circulation of Certain Volatile Oils. (*Journal of Phys.*, vol. ii, p. 446.)

16. ROY, C. S., AND BROWN, GRAHAM.—The Blood-Pressure, and its Variations, in the Arterioles, Capillaries, and Smaller Veins. (*Journal of Physiology*, vol. ii, No. 5, p. 323.)

1. *Aristow on the Influence of Rapid Changes of Temperature on the Heart.*—If the isolated heart of a frog, after lying in water at 10 deg. to 50 deg. Cent. (50 deg. to 122 Fahr.), be suddenly placed on ice, changes in the action of the heart occur, which are completely distinct from the changes of function which have been found by Cyon and Bowditch to result from a gradual change of temperature. Instead of the diminished frequency of pulsation, which one would expect to see when the heart is suddenly removed from warm water and placed on ice, at first the contractions become more rapid; and inversely, when the heart is removed from ice and placed in warm water, it begins to beat more slowly, or even the pulsations may for the first moment be completely arrested.

3. *Marchand on Irritation of the Heart of the Frog.*—The stimuli employed in these experiments were mechanical, chemical, thermic, and electric. Two varieties of preparation of the frog's heart were made use of, one of which differed from the other in containing, in addition to the muscular fibre, the ganglion-cells (and nerves). As a general result, it was found that a single instantaneous irritation gave rise to a typical series of pulsations only in those preparations which contained ganglia. Since these pulsations are also occasioned by stimulation with ammonia, and by a single electric stimulus, it is clear that this typical series of pulsations arises not from the nerves, but from the ganglion-cells; for ammonia does not affect the motor nerves, and a single shock of electricity only occasions one corresponding muscular contraction.

4. *Samuelson on Ligature of the Coronary Arteries.*—When these vessels are ligatured in rabbits according to von Bezold's method, in the angle between the bulbus aortæ and the ventricle, there ensues a rapid enfeeblement of the heart's action. The author has found that in curarised rabbits (with artificial respiration), it is possible, with care, to observe the effects of ligature of the coronary arteries, not merely for one or two minutes, as Bezold did, but for so long a period as thirty or forty minutes. The first thing which takes place after ligature or compression of these vessels, is a retarding of the rhythmic cardiac contractions. The left ventricle is first affected; the right, on the contrary, beating at first slightly faster, and then gradually becoming slow. The beats become slower and slower until they cease—the left ventricle ceasing to contract a little before the right. The second result of compression of the coronary arteries was a gradual loss of power in the heart's contractions. The third result, which has not been observed previously by any author, consists in a gradual distension of the left auricle when the left coronary artery is compressed. The auricle swells up more and more, becomes clear red, and the rhythmical contractions change to oscillatory movements, which ultimately cease entirely. This effect occurred when the right ventricle and auricle continued to contract powerfully, along with a weakened condition of the left ventricle. Whenever the compressor was removed from the left coronary artery, and the left ventricle had again began to beat in a normal manner, the left auricle became emptied in one to two minutes, and resumed its normal action. This very interesting phenomenon explains almost completely the various results of aortic stenosis and angina pectoris, even to the acute œdema of the lungs sometimes observed.

5. *Grützner on the Heart's Movements.*—On the same woman, the movements of whose heart had been already examined by Filehne and Penzoldt, the author made a series of observations by the graphic method. Small funnels covered with India-rubber membrane, having pieces of cork attached, were applied to various points of the heart, and their movements registered by means of Marey's apparatus. The curves obtained from points near the cardiac apex corresponded entirely with the results obtained by Marey, Landois, etc., but those from the base were somewhat different. In regard to their peculiarities, the original must be consulted.

8. *Ringer and Morshead on the Relative Paralysing Action of Atropin and Pilocarpin on the Heart.*—The topical application of pilocarpin in large doses is well known to retard and weaken the heart, but several hours are usually required before great weakness or arrest of the heart's action is reached. In this respect atropin appears to act as energetically as pilocarpin, and the object of the experiments recorded in this paper was to test the relative action of these two drugs. The various observations were made on the heart of the frog, sometimes *in situ* (the fluid being dropped into the cavity of the pericardium), and sometimes after being removed from the body. The conclusions to be drawn from these experiments are summarised as follows. 1. Sulphate of atropin topically applied is almost as powerful a paralyser of the heart as pilocarpin. 2. Atropin paralyses either the excito-motory cardiac apparatus, or the cardiac muscle, or both these structures. 3. Extract of muscarin paralyses the cardiac muscular substance, and probably the excito-motory apparatus. 4. In part at least, atropin antagonises the action of muscarin by possessing for the cardiac structures (excito-motory apparatus and cardiac muscle) a stronger affinity than muscarin, whereby atropin, a cardiac paralyser, replaces muscarin, also a cardiac paralyser; but atropin has a far weaker paralysing action than muscarin: hence, when atropin replaces muscarin in the cardiac structures, the powerful paralysing effect of muscarin is replaced by the far weaker paralysing effect of atropin, and so a heart weakened or arrested by muscarin becomes strengthened, and commences beating again on the addition of atropin. 5. Pilocarpin, which weakens or arrests the heart, also antagonises the action of muscarin, which still more powerfully paralyses the heart. The authors suggest the same explanation for this antagonism as for the antagonism of atropin for muscarin, namely, that it is due to chemical displacement. Pilocarpin having a stronger affinity for the excito-motory apparatus, and for the muscular substance, displaces muscarin, and substitutes its own weaker paralysing action for that of muscarin. 6. These experiments do not show that the antagonism between atropin and muscarin is not in part due to their antagonism on the inhibitory apparatus; in which case atropin, having a stronger chemical affinity for the structures of inhibitory apparatus, displaces muscarin, and substitutes its paralysing action for the stimulating action of muscarin. [It is to be observed that the elaborate observations

of Harnack and Meyer go to show that this apparent antagonising action between muscarin and pilocarpin is due to the adulteration of the latter drug with another alkaloid contained in jaborandi, viz., jaborin. Pure specimens of pilocarpin, according to these authors, do not antagonise the action of muscarin.—*Rep.*]

12. *Ringer on the Antagonisms of Aconitia on the Frog's Heart.*—When aconitia is injected under the skin of a frog (1-100th to 1-10th grain), loss of sensation, as indicated by inability of stimuli to call forth reflex actions, comes on in a few minutes, and all voluntary motions are lost in about half-an-hour. If the heart be laid bare it will, according to the close, be found to be either beating slowly and feebly, or to be in complete stand-still, with the cavities widely distended. The auricle beats much more rapidly than the ventricle, and in the latter the contractions are irregular, one part of the wall contracting by itself, and forcing the blood to another part of the ventricular cavity, causing the wall to be pouched at that point. After all contractions have ceased, and the heart is at complete rest, a beat of the ventricle may be evoked by direct mechanical stimulation. Aconitia acts more powerfully on the ventricle than on the auricles, and it affects the automatic ganglia which carry out spontaneous beats earlier than the machinery (reflex ganglia, muscular substance), by means of which artificial stimuli give rise to a beat. Aconitia has a more powerful action on the cerebro-spinal centres than on the nervous structure of the heart; for, after complete paralysis, the heart often continues to contract well for some time. The general depression from a poisonous dose of aconitia is partly, and perhaps chiefly, due to the direct action of the drug on the nervous centres, rather than to the weakening of the circulation consequent on failure of the heart. In every instance, atropin effectually antagonised the action of aconitia. When the ventricle was completely paralysed, atropin restored the pulsation; where the pulsations were only slowed, weakened and inco-ordinate, atropin strengthened, accelerated, and co-ordinated them. Atropin has a stronger affinity for the cardiac tissues than has aconitia; the latter consequently is replaced by the former, first in the muscular, and subsequently in the nervous ganglionic tissue. It is, however, to be observed that this antagonism is not absolutely complete. The heart-beats, though they may be restored to perfect co-ordination, remain slower and weaker than normal. Aconitia does not antagonise the action of muscarin, nor can muscarin antagonise the action of aconitia on the heart; but atropia antagonises the combined actions of aconitia and muscarin on the heart. Pilocarpin does not antagonise the cardiac action of aconitia, but atropin antagonises the combined effects of aconitia and pilocarpin. The author believes that atropin antagonises muscarin, pilocarpin, and aconitia, because it has a stronger affinity for the muscular and nervous structures of the heart than these substances, and displaces them, replacing their effect by its own.

15. *Woods and Reichut on Volatile Oils.*—When injected into the circulation, the oils, both of cloves and of peppermint, kill by paralysing the heart. Even after the use of very small quantities, the reduction of the arterial pressure was immediate, marked, and lasting. In several cases, fatal syncope was produced in the cat by the injection of from four to six drops of the oil of cloves into the jugular vein. When the oils were administered subcutaneously, no rise of arterial pressure was ever obtained; but in several cases in which the air of an artificial respiration-apparatus was passed through oil of cloves before reaching the lungs of the animal, there was a decided and progressive rise of pressure. Oil of cloves is at least twice as strong as oil of peppermint in its action on the heart. Oil of nutmeg, on the contrary, produces death by asphyxia, preceded by a prolonged stage of unconsciousness and profound anæsthesia.

16. *Roy and Graham Brown on Capillary Blood-Pressure.*—Before these observations were undertaken, the pressure of blood in the capillaries had been investigated experimentally by one physiologist only. In a series of experiments, made in Ludwig's laboratory at Leipzig, von Kries sought to determine the pressure of the blood in the capillaries of the human finger. He employed for this purpose small glass plates, which he pressed upon the skin by means of weights, observing the weight required to cause a distinct whitening of the compressed, as compared with the surrounding skin. The fallacies inseparable from so rough a method are, as Roy and Brown point out, very great. The method employed by these latter observers is simple enough in principle. It consists in compressing a small area of the web, mesentery, or tongue of the frog, or tail of the newt or of small fish, between a glass plate and a minute cushion made of transparent flexible membrane, which is filled with air, the pressure of which can be raised or lowered at will, and the height read off on a water manometer. The compressed tissue can be watched through a microscope, and the changes in the circulation, produced by the graduated pressure applied, can be followed even with high magnifying powers. By means of control experiments of various kinds, the authors were able to show that neither the layer of epithelium nor the soft tissue in which the capillaries are embedded can protect the capillary walls from external pressure, and that, therefore, that pressure, applied by the cushion, which just suffices to cause collapse of the capillaries, must be looked upon as slightly higher than the intracapillary pressure. For details of the method employed the original communication must be consulted (the apparatus is clearly figured), as well as for a description of the means which were taken to verify its accuracy. Among the most interesting results of increased extra-arterial pressure produced by this method, is the invariable change of the normally equable and uniform blood-flow through the capillaries and small arteries into a pulsatile variation of the rapidity of the circulation. With external pressures, which approach that of the blood within the vessels, the flow in the arterioles presents an alternate movement of advance and retirement; the former, however, predominating until the extravascular pressure has been raised high enough to cause collapse of the capillaries. This phenomenon, which, as the authors point out, corresponds with the pulsation in the retinal vessels produced by raising the intra-ocular pressure, and with several well-known analogous facts, is, as they show, due to a propagation of the pulse-wave as far as the capillaries. It would lead us too far to refer to the beautiful mechanism by which the friction in the capillary tubes, and the elasticity of their walls, fit them, in normal circumstances, to convert what would otherwise be a jerky pulsatile flow into the smooth and equable circulation which can be seen through the microscope in the normal web. After describing the influence of variations of the extravascular pressure on the circulation, the authors proceed to treat of the degree of elasticity of the capillary walls, which

this method allowed them to investigate with great accuracy. Roughly summarised, the results indicate that the capillary walls 'are elastic, but not sufficiently elastic to explain the great variations of calibre which we know they can present'. Next, comes the vexed question as to the contractility of the capillary walls. By means of this method, the intra-capillary pressure could be estimated with very considerable accuracy, and the authors could readily investigate how far the diameter of any given capillary vessel corresponded with the pressure of the blood in its interior; or, in other words, how far the elasticity of the capillary wall could explain the changes in diameter which can readily be produced. On this point, the authors believe that the evidence they adduce is sufficient to lead clearly and convincingly to the conclusion, not only that the capillaries are contractile, but that their contractility is in constant play, and that this function of these delicate walls must play a *rôle* of primary importance in the economy of the system. The fourth division of this paper deals with 'the effects on the capillary circulation of localised temporary anæmia'. The authors believe that the regulation of the calibre of the capillaries is principally, if not solely, of a purely local nature. They attempt to show that the diminution in the tissue-elements of the amount of the oxygen, or other constituent of the blood, or an increase of the carbonic acid, or other product of the chemical changes of living tissues, must be looked upon as the cause of the well-marked temporary congestion which follows localised anæmia of short duration. The same causes, they point out, are present in the case of various other congestions, notably in that of the first stage of inflammation, which may most easily be explained by assuming it to be thereby produced. Facts which lead us from physiology into the domain of pathology, and show that the same mechanism and the same stimuli are at work (though to a different degree) in both, are, we believe, of especial interest. The authors thus conclude this chapter: 'We have already shown that the capillary vessels are capable of varying in diameter independently of one another. The conclusion that each capillary is capable of varying its calibre in accordance with the requirements of the tissues which it supplies with blood, appears to us, in the light of the facts contained in the above pages, to be perfectly logical.' The fifth part treats of the pulse-wave in the capillaries, and its variations in height under different conditions. By means of the method employed, it was easy to find the pressure of the blood both at the apex and at the base of the pulse-wave, and thus the authors are able to give a statement of their results in a numerical form. The sixth part deals with the relation between the diameter of the arterioles and their internal pressure; and here the authors refer to the extent to which the capillary pressure can be modified by variations in the calibre of the arteriole which supplies the blood. In the eighth chapter, reference is made to the elasticity of the walls of the arterioles.

RESPIRATION.

RECENT PAPERS.

1. EWALD, J. R.—The Normal Respiratory Pressure and its Curves. (Pflüger's *Archiv*, Band xix, p. 461; and Virchow and Hirsch's *Jahresbericht*.)

2. GAD, J.—A new Pneumatograph. (*Arch. für Anat. und Physiologie, Physiol. Abtheilung*, 1879, p. 181.)

3. GAD, J.—A few Critical Observations concerning Pneumatometry. (*Ibid.*, p. 553.)

4. KRONECKER and MARCKWALD.—On the Respiratory Movements of the Diaphragm. (*Ibid.*, p. 592.)

5. NEUPAUER, J.—The Physical Groundwork of Pneumatometry, and of the Atmospheric Changes in the Lungs. (*Deutsches Archiv. für Klin. Med.*, Band xxiii, p. 481.)

6. FRANKENHÄUSER, C.—Observations on the Structure of the Tracheo-bronchial Mucous Membrane. (*Inaug. Dissert.*; Dorpat; and Virchow and Hirsch's *Jahresbericht*, 1879, p. 57.)

7. LANGENDORFF, O.—On Respiratory Centres in the Spinal Cord. (*Centralblatt für die Med. Wiss.*, 1880, p. 97.)

8. CHRISTIANI, A.—A Respiratory Centre on the Floor of the Third Ventricle. (*Ibid.*, p. 273.)

9. FILEHNE, W.—On the Action of Morphia on the Respiration. (*Arch. für Exper. Path.*, Band x, p. 442, xi, p. 45; also, *Archiv für Anatomie und Phys., Phys. Abth.*, 1879, p. 235; *Centralbl. für die Med. Wiss.*, 1880.)

1. *Ewald on Tracings of the Respiratory Pressure.*—These tracings were taken under conditions which interfered least with the normal breathing. The author managed this by making the obstruction to the stream of air as small as possible (for any such obstacle gives rise to variations on the respiratory pressure with the greatest readiness), and by arranging that the registering apparatus should be as delicate as possible.

2. *Gad on a New Pneumatograph.*—Gad describes an apparatus which is designed graphically to represent the changes of volume of the thorax during respiration. He calls it the 'Aeroplethysmograph'. The instrument resembles the spirometer, and is constructed specially that the back action of pressure and suction upon the inner walls of the alveoli of the lung may be avoided, and that the utmost possible simultaneity may exist between the movements of the writing lever and those of the thorax. This result is attained by making the movements very delicate. The obstruction to respiration which the instrument gives rise to only amounts to 1 to 2 millimètres of water-pressure, and is very slight indeed compared to the normal obstacles which the air current finds at the glottis and in the nostrils. Gad draws attention to the fact that not only does the aeroplethysmograph give curves which show the size and rhythm of the respirations; but also that these curves give an indication as to whether the work done by the respiratory movements in a time-unit has varied during the course of the observation. It follows that the curve, representing the volume of air respired, represents at the same time the changes in the thorax in respect to distance from its centre of gravity.

4. *Kronecker and Marckwald on the Respiratory Movements of the Diaphragm.*—In this paper, the authors attempt to clear up the question as to whether the respiratory movement of the diaphragm is to be regarded as a simple contraction or as a tetanus of short duration. Both the phrenic nerves were stimulated with a single induction-shock, while the contraction of the diaphragm was marked by means of a lever on a revolving kymograph-cylinder. It was found that the contraction occupied from one-eighth to one-fourth of the time of a respiration. It was therefore shewn that the respiratory contraction is a short tetanus. When the breathing ceased after section of the medulla, respiratory movements could be roused by rhythmic tetanisation of the peripheral ends of the phrenic nerves, and for some minutes the animal could be thus preserved from asphyxia.

5. *Neupauer on Pneumatometry.*—This article is an attempt to trace back the phenomena of pneumatometry to the physical factors which regulate the exchange air in the lungs. Without giving with any minuteness the arguments of this very interesting article, it may suffice to indicate some of the points which Neupauer brings forward. During each inspiration the pressure of the air in the lungs sinks below 760 millimètres (30 inches) of mercury (atmospheric pressure); and conversely, under all circumstances, during expiration the air-pressure in the thorax must exceed that of the atmosphere. He believes that the trachea and bronchi become stretched longitudinally during inspiration, with a resulting narrowing of their lumen; and that the expiratory drawing together of the lung commences in the thick-walled strong air-tubes, then proceeds to the thin-walled tubes, and ends with the alveoli. According to Waldenburg, the value of pneumatometry depends upon three factors; (1) the power of the respiratory muscles; (2) the power of chest-movement, and the power of stretching of the lungs; (3) the elasticity of the pulmonary parenchyma. To these Neupauer would add the mobility of the neighbouring organs, which must change their position during respiration, the quantity of residual air, and the difference of temperature between the air inspired and the air expired. In his study of the result of the quantity of residual air on pneumatometry, Neupauer was unable to find mention of any method of estimating its quantity. He therefore devised a method for himself. He proceeds from the physical principle, that when a certain quantity of air expands from a smaller space into a larger one, its tension diminishes in the inverse ratio to the size of the spaces. At the end of a forced expiration, there remains in the chest only residual air. If inspiration be now made with a pneumatometer, the residual air comes to occupy a space which equals that for the residual air, *plus* the vital capacity. Hereby a diminished tension takes place in the air, which equals the inspiratory power as indicated by the pneumatometer.

6. *Frankenhäuser on the Mucous Membrane of the Trachea and Bronchi.*—Careful observations lead the author to conclude that this mucous membrane consists of two layers. The subepithelial membrane must not be confused with the epithelioid lining of the lymphatics. It could not be demonstrated in the human trachea, but readily in the cow, dog, pig, horse, and rabbit. When present, the basal membrane is very thin. Lymphoid cells were found irregularly distributed all through the mucous membrane. In the submucosa the glands contained numerous lymphoid cells, from which the author concludes that they play an important part in the action of the glands.

7. *Langendorff on Spinal Respiratory Centres.*—The existence of respiratory centres in the spinal cord is indicated by certain experiments given in outline in this article. When the medulla oblongata is separated completely from the cord by a section made with a sharp instrument in young rabbits, and artificial respiration at once commenced, in many instances one or two respiratory contractions occur after a little time. The period at which these respirations take place depends upon the amount of apnœa which has arisen with the artificial respiration. In newly born animals, whole series of such complete respirations may be graphically represented. In adult animals, if this action do not take place, it may be excited by means of strychnine, which Langendorff recommends to be given in small doses for this purpose. In animals which have not received strychnine, if the spontaneous respiratory movements do not take place after separation of the medulla, they can almost invariably be excited reflexly, by mechanical irritation of the tail, foot, etc., or by electric irritation of the sciatic nerve. While reserving the full statement of his conclusions for a future communication, Langendorff indicates the probability that the automatic respiratory centres are situated in the spinal cord, and that the medulla oblongata only possesses the functions of a regulating apparatus, the importance of which, for normal respiration, must not be undervalued.

8. *Christiani on a Respiratory Centre in the Floor of the Third Ventricle.*—In a former communication, Christiani stated that the mechanical or electric irritation of the optic or of the auditory nerve influenced both respiratory and cardiac movements. Their irritation was inspiratory, and therefore they act antagonistically to the fifth nerve, which has an expiratory action when irritated. In the further course of these observations, he came upon evidence of a respiratory centre, the position of which he provisionally describes as follows. It lies at the inner part of the optic thalamus, close to the corpora quadrigemina and floor of the third ventricle. When this centre is irritated mechanically, chemically, electrically, or through sensory nerves, arrest of the inspiration takes place. The centre is circumscribed; at a few millimètres' distance irritation has no effect.

9. *Filehne on the Action of Morphia on the Respiration.*—In the action of morphia on the respiratory movements, Filehne recognises three stages; (1) an early stage with retarded respiration; (2) a later stage, rhythmical breathing; (3) stage of agony. After the first stage, in which the breathing takes place in a 'periodic form', follows, in rabbits to which large doses of morphia have been given, a period during which the breathing is rhythmical, and has increased in frequency up to the normal rate, and the blood-pressure and heart-action appear to be perfectly normal. In order to explain the fact that during this stage the respiratory rate, which was previously diminished, increases to a normal frequency, Filehne does not think that it is necessary to assume that the excitability of the respiratory centres has become restored. He believes that such an effect must be produced, though the excitability of these centres remain depressed, when the 'blood-stimulus' increases up to a certain intensity. The degree of venousness of the blood in the carotid serves as an index of the intensity of this 'blood-stimulus', and the relative ease with which symptoms of apnœa are produced with artificial respiration measures the excitability of the respiratory centres. Both of these indices the author found to be increased during the second stage of morphia-poisoning, and he therefore concluded that during that period the irritability of the respiratory centres remain depressed. The more this sinks, the more venous does the blood become, until at last a point is reached when the functions of the organs of the body can no longer be carried on for want of oxygen, and then commence the phenomena of the third stage, the stage of agony. The breathing becomes unfrequent and superficial, and at last stops, while the heart still continues to pulsate. This is the moment at which artificial respiration sometimes saves the animal. Applying these facts to the therapeutic use of morphia in cases of dyspnœa, Filehne lays down the following rules. 1. Where the dys-

pnœa depends on the fact that too little blood is circulating in the medulla, while no obstruction to the arterialisation of the lungs exists, then the administration of morphia, in doses which will reduce the breathing to a normal type, is admissible and to be recommended. 2. If, on the contrary, the dyspnœa arises from an obstruction to the arterialisation of blood in the lungs and is compensatory, then morphia may only be used with the greatest precaution.

J. GRAHAM BROWN, M.D.

REVIEWS.

Surgical Enquiries; including the Hastings Essay on Shock, the Treatment of Surgical Inflammations, and Numerous Clinical Lectures. Second Edition. By FURNEAUX JORDAN, F.R.C.S., Surgeon to the Queen's Hospital; Professor of Surgery, Queen's College, Birmingham; Consulting Surgeon to the Women's, and West Bromwich Hospitals. London: J. and A. Churchill, New Burlington Street.

MR. FURNEAUX JORDAN has considerably enlarged the second edition of his *Surgical Enquiries*, by including his Hastings Prize Essay, and adding abstracts of various clinical lectures.

The book commences with an essay on Shock. The causes, symptoms, mechanism, its effects on sex and age, the modes of death, and pathological appearances after death, and other details in connection with shock after operations and injuries, are considered. For the treatment of severe cases, the immediate application of extreme heat has been proved, by experience and experiment, to be the best remedy; we are informed, in a foot-note, that sixteen years' further knowledge confirms this statement. The use of anæsthetics is also of advantage in diminishing the severity of shock, and maintaining the vital powers of the body.

In the treatment of Surgical Inflammations, the establishing of counter-irritation over the nearest vascular trunk is still advocated. Iodine, on the whole, seems to be thought the best agent to employ. The question is asked, if cancer and inflammation may not merge into one another by intermediate gradational steps? The author has thought and taught this doctrine for many years, owing to the fact that abscess is frequently seated in, or close by, a cancer, and malignant disease may follow in the situation of a former abscess; sometimes, also, it is very difficult to diagnose correctly cancerous from inflammatory induration. Old cicatrices, too, when inflamed, are also liable to take on malignant action. Cancer itself is regarded as constitutional; but Mr. Jordan does not regard this as an argument against removing the local manifestation; he instances three cases where, after excision of the mamma (in one patient both breasts were removed) nearly ten years of life were enjoyed. As a form of dressing, in many instances, after operation, a constantly moist antiseptic sponge, which is secured upon the affected part, and kept wet by repeated application of a solution of carbolic acid or terebene, is highly recommended. Such a dressing effects 'rest, adjustment, and gentle pressure'.

In a clinical lecture on trephining, excellent rules are laid down as to when the operation should be performed. A successful case is also recorded, where, in a punctured fracture of the cranium, a piece of a felt hat, and paper lining, one inch in length, were extracted from the brain-substance. If, in a fracture of the skull, hæmorrhage from the middle meningeal artery be taking place, a ligature of the common carotid on the affected side is recommended. It is thought that this step might not only stop the hæmorrhage, but also lessen the effects of pressure, besides being a less serious operation than trephining.

Mr. Jordan calls attention to two localities in which cellulitis not unfrequently occurs, and these are the two ends of the digestive channel; both seem to attack middle-aged men who live freely, and from the nature of their occupation are exposed to cold. In the neck, the disease is particularly apt to be fatal, owing to the proximity of the serous cavities and other important structures; sloughing only rarely takes place, death being attributed to exhaustion. When inflammation of the cellular tissue around the rectum takes place, its course is very rapid. A hard, painful swelling appears in the perinæum; the skin covering the same disappears, and a mass of black fetid tissue, with very slight suppuration, shows itself; the gangrenous slough separates but slowly, having a large cavity. In both the neck and the ischio-rectal fossa, this cellulitis is marked by extreme prostration of the patient. Early incisions, as a mode of treatment, are advocated.

The volume also contains some interesting abstracts of clinical lectures on diseases of the rectum and diseases of the testes, in which ideas and suggestions not contained in the ordinary text-books will be found. We also find a description of the methods of performing the various operations with which Mr. Jordan's name is generally associated, viz., amputation at the hip-joint, by a straight incision over the great trochanter, enucleating the head of the bone, and completing the disarticulation by means of a circular incision at the middle third of the limb; a method of performing lithotomy by incising the anterior wall of the bladder; of treating impassable strictures of the urethra by cutting into the tube from behind, through the rectum; of relieving congenital phimosis in the adult, and of making a mouth from one lip, after the other has been destroyed. A suggestion is also made, that in fat people strangulation of a piece of gut might be averted, if a pendulous belly is produced by cutting the recti muscles close to the pubic bones, so making room for the deposit of fat. The work, as a whole, is worthy of every attention on the part of all who are practical surgeons.

THOMAS F. CHAVASSE, M.D.

On Removal of the Entire Tongue by the Walter Whitehead Method. By EDWARD LUND, F.R.C.S. London: J. and A. Churchill. 1880.

IN this essay, which is an extension of a paper read before the Medical Society of Owens College, Mr. Lund recommends to operating surgeons a proceeding for total removal of the tongue by excision with scissors only. This method, in its general arrangement and system, as described here, has been devised, it is stated, by Mr. Walter Whitehead, who for many years has studied closely the clinical history and treatment of lingual cancer. Complete removal of the tongue for this disease is recommended in all cases save those where the cancer is confined to a small isolated spot on the side or tip of the tongue, and also as a palliative measure in cases of very extensive cancerous infiltration. Syme's method, Mr. Lund holds, is open to objection, on

account of its extent, and the application of the *écraseur* and cautery, on account of the presence on the divided surface of bruised or burned tissue, which may become the focus of auto-pyæmic inoculation.

The Walter Whitehead operation consists in simply excising the tongue by a succession of cuts made with a pair of straight scissors, the mouth of the patient being kept open, and steadily fixed in this condition by Mr. Mason's gag. Mr. Lund describes the proceeding at some length, and insists on the importance of its being worked out in a series of well-arranged stages, each of which must be taken deliberately, and yet without the least halt or hesitation. This operation seems to have been successful in the practice of the Manchester surgeons; and Mr. Lund states that it is wonderful how little blood will be lost, and how little confusion or disorder will occur during its performance. Still, we cannot but think that it will be found a risky operation in the hands of a surgeon who has not seen it practised, and who is wanting in the aid of an equally experienced assistant. W. JOHNSON SMITH.

The Structural Anatomy of the Female Pelvic Floor. By D. B. HART, M.D. Edinburgh: Maclachlan and Stewart. 1880.

THE observations which form the basis of the work under notice first appeared in the *Edinburgh Medical Journal*, and later were expanded into a graduation thesis at the University of Edinburgh. The work is illustrated by drawings from Braune, Legendre, Thomas, Breisky, Schroeder, and Schultze. It also contains original drawings by the author, as well as two life-size lithographs of vertical mesial sections of the female pelvis from nature, by Dr. Hart. The author draws the following conclusions from the sections and drawings which he has studied. The pelvic floor can be differentiated into a pubic and sacral segment, contrasted as follows: *Pubic segment:* Loose in its attachments; drawn up during labour; driven down in prolapsus uteri; passes down with the viscera in the genu-pectoral posture, when the vagina is distended by air, and is therefore intestinal. *Sacral Segment*—Firm in its attachments; driven down during labour; always remains in position (posterior vaginal wall excepted) in prolapsus uteri; remains in position in genu-pectoral posture, with vagina distended by air, and is therefore vertebral.

Three vertical 'lines of cleavage' exist in the pelvic floor. 1. *Vaginal* (*i.e.*, between vaginal walls).—All in front is drawn up in labour, and goes down with the viscera in the genu-pectoral posture after the vagina is distended with air. 2. *Recto-Vaginal* (between the anterior wall of the rectum and posterior wall of the vagina).—All in front comes down in prolapsus uteri; all behind remains *in situ*. 3. *Rectal* (between the anterior and posterior walls of the rectum).—All in front of this is lifted up in the 'bimanual', and when the rectum is distended with air. The first line is therefore the physiological line of cleavage, the second is the pathological, and the third the instrumental. The Sims speculum pulls back the sacral segment, while, by the position of the patient, the pubic segment drops down. The Hodge's and ring pessaries are kept in posture by the pubic segment pressing them against the oblique sacral one. In retroversion of the uterus, and in prolapsus uteri, they keep the posterior vaginal wall its proper length, and make it rigid, so that it runs round the top bar of the pessary like a pulley, and is reflected down on the cervix, making it tense. It thus pulls the cervix back, and keeps it so. The work is a valuable contribution to our knowledge on topographical anatomy, and reflects much credit on Dr. Hart.

FANCOURT BARNES, M.D.

RECENT GERMAN BOOKS.

Baginsky, Ad.—Practische Beiträge zur Kinderheilkunde. 1 Heft. Pneumonie und Pleuritis. gr. 8. Tübingen, Laupp. 3 Mark.

Berlin, R.—Ueber die anatom. Zusammenhang zwischen orbitalen und intracraniellen Entzündungen. Lex.-8. Leipzig, Breitkopf and H. 75 Mark.

Berlin u. H. Sattler, Die Krankheiten der Orbita. Mit Holzschn. gr. 8. Leipzig, Engelmann. 10 Mark.

Biedert, Ph.—Die Kinderernährung im Säuglingsalter. gr. 8. Stuttgart, Enke. 8 Mark.

Braun v. Fernwald, Carl Ritter, Lehrbuch der gesammten Gynäkologie. 2. Aufl. gr. 8. Wien, Braumüller. 20 Mark.

Brücke, E.—Vorlesungen über Physiologie. 1 Bd. 3. Aufl. Mit 81 Holzschn. gr. 8. Wien, Braumüller. 15 Mark.

Erb, W.—Ueber spinale Myosis und reflectorische Pupillenstarre. gr. 4. Leipzig, Edelmann. 75 Mark.

Falck, F. A.—Lehrbuch der praktischen Toxicologie. gr. 8. Stuttgart, Enke. 8 Mark.

Flamm, O.—Die Heil- und Pflegeanstalt Pfullingen in ihren ersten zehn Jahren. Mit e. Ansicht u. verschiedenen Tfln. gr. 4. Reutlingen (Tübingln, Osiander). 4 Mark.

Kassowitz, M.—Die normale Ossification und die Erkrankungen des Knochensystems bei Rachitis und hereditärer Syphilis. 1 Thl. Mit 13 lith. Tfln. gr. 8. Wien, Braumüller. 10 Mark.

Kehrer, F. A.—Lehrbuch der Geburtshilfe für Hebammen. Mit. Holzschnitten. 3 Abthlgn. gr. 8. Giessen, Roth. 6 Mark.

Messerer, O.—Ueber Elasticität und Festigkeit der menschlichen Knochen. Mit 16 Tfln. u. e. Holzschen. gr. 4. Stuttgart, Cotta. 9 Mark.

Mettenheimer, C.—Medicinische Schediasmen. I. Einige Capitel über die Gewerbeordnung und ihren Einfluss auf die Medicin. gr. 8. Ludwigslust, Hinstorff. 1 Mark.

Rheinstaedter, A.—Ueber weibl. Nervosität. Lex.-8. Leipzig, Breitkopf and H. 75 Mark.

Schüller, M.—Experimentelle und histologische Untersuchungen über die Entstehung und Uraschen der skrophulösen Gelenkeiden. Mit Abbildgn. im Texte. gr. 8. Stuttgart, Enke. 7 Mark.

Stanelli, R.—Die Tuberculose und Lungenschwindsucht. Lex.-8. Wien, Gerold's Sohn. 1 Mark.

Wernicke, C.—Ueber den wissenschaftlichen Standpunkt in der Psychiatrie. Ein Vortrag. Mit 1 Taf. gr. 8. Kassel, Fischer. 2 Mark.

NEW INVENTIONS.

MISTURA PEPSINÆ COMPOSITA CUM BISMUTHO.

This combination of Messrs. Hewlett is one which has been extensively tested, and with good results. It is justly popular in the profession as a very valuable and effective combination. It serves not only to improve apepsia, but to lessen the gastric pain and to facilitate difficult and painful digestion, without setting up any evils of its own. It is a very good crutch for persons of weak stomach to lean on.

MISCELLANY.

TYPHOID AND DRINKING-WATER.—In the recent epidemics of typhoid fever, drinking-water has played its usual prominent part. The British continental records are full of examples of the danger of neglecting this source of disease. Where town works or country wells—as is often the case—cannot be depended on, a natural mineral water, such as Apollinaris, renders great service. Its purity offers the best security against the dangers common to many of the ordinary drinking waters, whether in rural districts or in towns and cities.

STATISTICS RELATING TO MEDICAL EDUCATION OF WOMEN IN RUSSIA. — The St. Petersburg School of Medicine was opened to women in 1872. During eight years 796 students matriculated. Under 22 years old were 72 per cent.; between 22 and 30, 24 per cent.; above 30, 3 per cent. According to social condition they were classified: single, 89.4 per cent.; married, 9 per cent.; widows, 1.6 per cent. As the course of studies is five years, only the first three classes had graduates; their number is 111, corresponding to 266 matriculates. During 1879, 453 students pursued the study of medicine; and, as 111 graduated and 30 died, 202, or 25 per cent., abandoned their studies. This large percentage is due to the fact that the majority of students are obliged, while studying, to earn their living by giving lessons, literary work, etc., a condition not favourable for a steady study of five years.

ROYAL INSTITUTION OF GREAT BRITAIN.—The following are the arrangements for the Friday evening meetings before Easter, 1881:—January 21, Mr. Warren De La Rue, D.C.L., F.R.S., Sec. R.I., "The Phenomena of the Electric Discharge with 14,400 Chloride of Silver Cells"; January 28, Dr. Andrew Wilson, F.R.S.E., "The Origin of Colonial Organisms"; February 4, Dr. Arthur Schuster, F.R.S., "The Teachings of Modern Spectroscopy"; February 11, Mr. Robert S. Ball, LL.D., F.R.S., "The Distances of the Stars"; February 18, Sir John Lubbock, M.P., D.C.L., F.R.S., M.R.I., "Fruits and Seeds"; February 25, Dr. J. Burdon-Sanderson, LL.D., F.R.S., "Excitability in Plants and Animals"; March 4, Sir William Thomson, LL.D., F.R.S., "Elasticity viewed as Possibly a Mode of Motion"; March 11, uncertain; March 8, W. H. Stone, M.D., "Musical Pitch, and its Determination"; March 25, Mr. Alexander Buchan, M.A., F.R.S.E., Sec. Met. Soc. Scot., "The Weather and Health of London"; April 1, uncertain; April 8, Professor Tyndall, D.C.L., F.R.S., M.R.I. The Friday arrangements depend in great measure on the free kindness of eminent men, whose time is subject to the sudden claims of public or professional duty. They are therefore liable to change. The discourse for each Friday will be announced in *The Times* of the Tuesday previous. The doors will be open at 8 o'clock; the discourse will begin at 9 o'clock. Professors Tyndall and Dewar will lecture after Easter.

INTERNATIONAL MEDICAL CONGRESS.—The following is the proposed list of subjects for discussion in Section VIII (Mental Diseases). Anatomy: 1. Modes of Preparation of Nervous Tissue; 2. Morbid Appearances due to Modes of Preparation; 3. Minute Structure of Special Parts of the Brain.—Physiology: 1. Relation of Cerebral Localisation to Mental Symptoms, as Hallucinations; 2. Hypnotism.—Pathology: 1. Of Idiocy, Morphological and Histological Changes; 2. Relations of Insanity to Gout, Renal Disease, Exophthalmic Goître, and to Coarse Brain Disease.—Clinical: 1. 'Folie à double Forme;' 2. Influence of Intercurrent Diseases on Insanity; 3. Insanity due to Toxic Agents.—Therapeutical: 1. Use of Baths of Narcotics, of Chloral Hydrate, of Opium, and of Alcohol; 2. New and Unusual Remedies.—Asylum Administration: 1. Cottage and Village Treatment; 2. New Legal Codes. Austrian, Italian, English Projects.—Civil Relations of the Insane: 1. Marriage, Wills; 2. Insanity and Aphasia. — Criminal Relations of the Insane: Special Asylums for Insane Criminals. The President and Secretaries will feel obliged by intimation from those intending to be present at the Congress, and suggestions as to subjects for discussion. All communications regarding Section VIII should be addressed to Dr. Gasquet and Dr. G. H. Savage, Bethlem Hospital, St. George's Road, London, S.E.

FAR ON THE WAY TO CIVILISATION.—In his recent work on New Guinea, Signor D'Albertis thus describes the Papuan Maoris: 'The most perfect harmony seems to reign in families, and rare, indeed, are cases of quarrel among members of one household. They live in communities, sometimes of more than a thousand inhabitants, in well-built villages, worthy to be called small towns, both for their order and cleanliness. They are under the rule of the chiefs or landowners. The chief is looked upon as father of the family. He is called Pacao, and his servant or subject is called Irine. From all I could learn, slavery does not exist, and the sale of human beings is unknown. Their natural disposition is gentle and placid. They like to spend their time in talking and games, in which men and women take an equal share. Playful and free of speech, they nevertheless do not transgress the bounds of modesty, either in word or deed. Women and children are included in every conversation, and often taken part in public discussions, which are usually held in the evening. Women are always respected, and in some villages they enjoy a certain supremacy, although the government of the house belongs to the husband. Labour may be said to be fairly divided between the two sexes, and they are accustomed to work from their earliest childhood.'

OPIUM-TAKING IN CHICAGO.—Having observed during the last five years, as physician of the Washingtonian Home, Chicago, a rapid increase in the number of cases to be treated for opium-habit, Dr. Earle was led to investigate the practice systematically. Fifty druggists to whom inquiries were put had 235 customers, or an average of 5 to each. Some, however, did not sell the drug unless prescribed; others asked a high price, etc. Of these 235 habitual opium-eaters, 169 were females—*i.e.*, about 3 to 1; and of these about one-third were of the prostitute class. As to nationality, Americans, as might be supposed, number most largely in use of the drug (160 out of 235). There were 17 Irish, 12 coloured, 10 Scotch, 7 German, etc. The vice is evidently one of middle-life, the larger number by far being from 30 to 40 years of age. But Dr. Earle found one lady, aged 50, who had taken the drug since she was 13; another, at 65, taking one drachm of gum opium daily; an aged couple (70 and 75 respectively) taking a drachm of morphia each every week whenever they could get it; and many young children, and even infants, are given opium. It is among the middle-class that the great majority of opium-eaters are found. Many reduced from high social standing are taking the drug. Most morphia-takers either are or have been married, and many are living separated from husband or wife. Various reasons are given for taking the drug—*e.g.*, its stimulative and happy effect, previous addiction to drink, unhappy marriage, rheumatism, neuralgia, 'female complaints', previous sickness, wounds received during the war, loss of property, and so on. But the great majority confess it was prescribed during some disease in which pain was a prominent symptom. Ladies generally use morphia, men of the lower classes gum opium, a few of both sexes use the tincture, while occasionally one is found taking large doses of paregoric. One widow, aged 50, buys of one druggist half a gallon every week. A large number of ladies take one-third to one grain of morphia daily. The great bulk of the drug consumed is by the mouth. Some take a dose two or three times a day, while some of the oldest opium-eaters take a large dose at intervals of from one to three days. Dr. Earle in his interesting paper further gives some account of the physical, mental, and moral effects of the drug.

The London
Medical Record.

BILLROTH ON LITHOTRITY AND LITHOLAPAXY.

In a published lecture (*Wiener Med. Woch.*, No. 44, 1880), Professor Billroth states that, from the year 1867 to the middle of the year 1879, he performed lithotrity in forty-one cases, of which nine were fatal. There were altogether one hundred and twenty sittings; and as each sitting, it is held, may be regarded as an operation, the mortality of this series of cases is estimated at about seven per cent. In seven of the fatal cases death occurred after one sitting only, and, in the two remaining cases, after two sittings. The fatal result was invariably due to vesical diphtheria, pericystitis, and pyæmia. The average number of sittings in the group of the successful cases was three. In ten cases the stone was wholly removed at the first sitting, in three cases after nine, and in four after ten sittings. The administration of an anæsthetic is advocated by Billroth in lithotrity. The operation, he holds, is thus facilitated: the patient has much less suffering, spasm is prevented, and the introduction of instruments and the injection of fluid may be effected readily and without causing pain. With anæsthesia the sitting may be prolonged, and the surgeon is enabled to exercise more care and decision in seizing and crushing the stone or its fragments.

Dr. Billroth speaks of Bigelow's operation of litholapaxy as one worthy of very earnest consideration. Important progress is made in the treatment of stone when one sitting only is rendered necessary. Moreover, it has been shown that the results of this operation have, on the whole, been better than those of prior methods of treatment. This operation has been performed by Billroth in six cases. The subject of the first case was a man, aged 59, who had a stone measuring three centimètres in diameter, and composed of lithic acid and lithates: the operation lasted forty-five minutes. In the second case, that of a man who had a phosphatic stone, with a diameter of two centimètres, twenty-three minutes were occupied in the operation. Of the next two cases, each of large and hard lithic acid stone, the diameter in one was three centimètres and a half, and, in the other, four centimètres. In the former case the operation lasted fifty-five minutes, and in the latter case two hours. The fifth case was one of a phosphatic stone, measuring two centimètres and a half in diameter, which was crushed and removed in half-an-hour. In the last case, the stone, which did not measure more than one centimètre and a half in diameter, was removed in fifteen minutes. Each of these cases progressed favourably and without severe febrile reaction. In the fourth case, the sitting of two hours' duration was followed by a rigor; but this, it is stated, was of a purely nervous character, and not associated with high fever. Some of the patients were discharged at the end of the second week, and in every case repeated examinations of the bladder were made after the operation in order to prove the absence of calculous fragments.

A considerable portion of Dr. Billroth's lecture deals with the subject of ammoniacal urine. It is stated that, if exclusion be made of those severe cases of cystitis and cysto-myelitis which constitute such unfavourable conditions in the operative treatment of stone, the chief source of danger in lithotrity consists, not in suppuration or partial separation of vesical mucous membrane and consequent hæmorrhages, but in the abundant presence of ammonia in the urine, either free or combined with carbonic acid; and, secondly, in the septic and diphtheritic character of the vesical inflammation set up in such cases. On the congested mucous membrane of a bladder, which has contained strongly ammoniacal urine, there may be very often observed, after death, small necrotic shreds, with superjacent fibrinous deposits, which are evidently the results of a diphtheritic process. The penetration of the ammoniacal urine into the mucous or other coats of the bladder results in inflammation of a like character, and any lacerations of mucous membrane produced by the lithotrite may become the starting points of a diphtheritic inflammation, involving the surrounding cellular tissues, and speedily resulting in diffuse suppuration and in pericystitis and periurethritis of a malignant character.

Dr. Billroth inquires how this ammoniacal change in the urine, whilst in the bladder, can be prevented, as such prevention in case of this alteration of the urine is an important condition of success after lithotrity at a prolonged sitting. Until the ammonia has disappeared, it is stated, lithotrity, especially when it is to be completed at one sitting, is to be regarded in such case as a highly dangerous operation. In some experiments, made about fifteen years ago, Dr. Billroth found that ammonia and carbonate of ammonia, when injected in small quantities into the cellular tissue of a strong and healthy animal, gave rise to intense phlegmon and gangrene. The intense action of ammonia, in exciting inflammation and producing gangrene, was also proved by Stricker in his endeavours to establish artificial croup. It was shown by the late Professor Simon of Heidelberg, that healthy and acid urine could be injected in large quantities into the living cellular tissue without doing any mischief; but it was soon afterwards proved by Menzel that if such urine, before absorption, becomes decomposed, it acts at once as an irritant, and always in consequence of the presence of ammonia.

In cases of ammoniacal urine, ingestion of fluids, particularly alkaline waters, in large quantities often does much good. In cases of paraplegia, injection of weak solutions of hydrochloric acid into the bladder may reduce the alkalinity of the urine; but, with subjects who are able to move about, the frequent introduction of instruments is usually attended with inconvenience. Phosphoric acid, which has been recommended by Brücke, very soon renders the urine clear and acid; but this medicinal agent, when taken repeatedly and in sufficient quantity, sets up a painful form of dyspepsia. Benzoic acid is also very efficacious in removing ammonia from the urine, but has the disadvantage of being soluble only in large proportions of water. After the administration of any of the above agents, the urine usually becomes transparent and acid, and, frequently, quite colourless, in consequence, it is supposed, of the action of the acid on the pigmentary constituents. In some cases, as where the renal pelves are much contracted, or the mucous membrane of the bladder is highly inflamed, the conversion of alkaline into acid urine is followed by much straining and pain during micturition, and by vesical

and urethral irritation. As a rule, however, the removal of ammonia from the urine results in considerable relief both of local and general disturbances. Chlorate of potash, when given in fifteen-grain doses, as recommended by Edlefsen of Kiel, is also an active agent in removing ammonia from the urine, but has no influence on the quantity of pus that may be mixed with this excretion. Patients, Dr. Billroth states, soon lose faith in this remedy, as the medicine tastes much like the solution of common salt. It is not, he believes, a safe agent when taken in large doses; and a case is reported in which the sudden death of a man, who had suffered from vesical calculus and ammoniacal urine, is attributed to the poisonous action of this salt administered in fifteen-grain doses.

W. JOHNSON SMITH.

SENATOR ON PNEUMOTHORAX.

IN the *Berl. Klin. Wochenschrift*, No. 52, 1880, is a short account of an address by Dr. Senator, giving the results of his experience as to the course and treatment of pneumothorax. 1. The pleural exudation appearing in pneumothorax is, he finds, more frequently serous than is generally supposed. 2. Frequently in unilateral pneumothorax double pleurisy appears. 3. If the pneumothorax, as is generally the case, is caused by pulmonary disease, the resulting exudation suffers decomposition extremely seldom, provided naturally that the diseased lung had not already gone on to decomposition, as, for example, in gangrene. The cause of this rare occurrence of decomposition seems to be the cellular spongy construction of the lung enabling it to act as a filter; also, the large amount of carbonic acid in the air of the lung. 4. That the air entering the pleura from the lung is comparatively harmless, more especially when compared with the air entering through a wound of the thoracic wall, is shown by the occurrence, even if rare, of cases where no exudation follows a rupture of the lung. 5. That pneumothorax may take place through decomposition of an exudation in a closed pleura, Dr. Senator considers not at all impossible. 6. As to treatment, Dr. Senator considers puncture of the air quite an useless, if a harmless, procedure, and recommends at first the use of injections of morphia. Later, if exudation have taken place, the absorption of the air should be awaited. When this has happened, or should there be pressing necessity, puncture, and should this show decomposition, make an incision at once. Should it show a serous exudation, aspirate cautiously. He would puncture and aspirate in cases of pus in the pleura with a diseased lung. Professor von Langenbeck, in the discussion on Dr. Senator's address, stated that in his experience the exudation from shot-wounds and crushing of the thorax (hæmopneumothorax) as a rule decomposed, and that very quickly. That a pneumothorax might occur from the decomposition of an exudation in a closed pleura he could quite believe, from cases of hydrocele and inflammation of the knee-joint, where gas had formed, under his own observation.

JAMES ANDERSON, M.D.

NASMYTH ON ENTERIC FEVER.

IN the *Edinburgh Medical Journal* for December last, Dr. T. Goodall Nasmyth, of Cowdenheath, N.B., gives some interesting particulars bearing upon the etiology of enteric fever. He divides the neighbourhood in which his cases originated into four districts—A, B, C, and D. In District A, the ground was hollow, the water flowing towards it on three sides and from it on one side. The houses are here arranged in rows of fifty, and are of one storey of two rooms. In addition, moreover, to the natural configuration of the place, it had further sunk, from subsidence by mining operations, 'four or five feet, and this interfered very much with proper drainage. In front of the door where the first case occurred there was a fœtid pool which had stood for months, the drain being destroyed by the subsidence mentioned. Into this pool all the filth and abominations from the houses near were flung, so that it became a horrid fermenting mass. It had existed for some time. No case of fever had occurred, and advocates for the contagious theory might have said this was a proof in favour of their case. It so happened that a case did happen, but we can easily imagine that the pool might have been there a year and no case occur. Since this case happened several more did happen, but as long as six months intervened between them —and this is something for those in favour of the contagious theory and those in favour of the fermentation theory.' Dr. Nasmyth believes that the cases which occurred in this district were due to defective sanitary arrangements, the presence of bad drainage, and fermentation of organic matter; a view which is supported by the fact that in one of the rows of houses—a two-storeyed one—in which the rooms were 'larger and better' than those in the other rows, which was situated on a slope, and better supplied with water, there was no fever, notwithstanding the fact that there were 'numerous cases near this row'. To sum up the condition of District A, in Dr. Nasmyth's words, 'It lies in a hollow, with insufficient outlet for drains; with too few drains, and of a bad construction, and insufficient water to flush them; in those places where the drains are in worst order, and the contents not flowing freely, and in consequence these cause pools of stagnant fermenting organic matter, typhoid fever is almost constantly endemic.' In District B, 'the only row of houses where the fever occurred is situated on the face of a hill, and exposed to the winds from every direction. Water can flow freely away from this row, and the open drain in front of the houses is made of brick, and can easily be flushed, if water were used for the purpose. All the sewerage is not emptied into this, the greater part being emptied over the ground in front of the houses, and allowed to percolate anywhere. A drain passes under this ground, and issues out about 100 yards away; a gentle stream flows from it, and the water seems beautiful and good. After several cases of fever had occurred in this row, and cases were still occurring, I discovered, to my horror, that this drain was used as the source of water-supply, and that typhoid germs were being supplied at one end of the drain and drinking water at the other. After the use of this was prohibited, the cases gradually diminished, and the fever disappeared.' In District C there was nothing of importance beyond stray cases; but the facts related of District D are very important, and we quote the entire passage. 'District D.—This brings me to the consideration of the last district where my cases occurred; and here there were peculiarities in the production of the fever of considerable interest. The houses are situated on the sides of a hill, and there is considerable facility for drainage. The water-supply is good, and plenty of it.

'The first case that occurred was a girl who had been working at a district two miles away, and where the fever was very common. The girl came home to her parents every night, and never stayed at night in the fever district. She took the fever first in the family, and was the first case in that district. The disease attacked several members of the family, but no one else in the row where she lived was attacked.

'The house where the next case occurred was about 150 yards away, and it seemed very difficult to account for this case, as the house was particularly good and clean, with no apparent bad drainage. The mother of the girl whom I mentioned was first affected had been in the habit of visiting this house, and it seemed as if she had conveyed the poison, and thus the disease seemed in this case to have been caused by infection. It is difficult to prove this, almost impossible. From this house the fever spread to two different houses, the houses of sisters of the patient, and who had been engaged nursing her. The others on each side escaped. Why were they singled out thus? What was the connecting link between their seizure and their sister's? Did they, in visiting their sister, receive the fever directly from her, or from a typhoid stool, or from some fermenting impurity near the house? The former view seems to be the most probable, and seems to support Budd's theory of the origin of typhoid by contagion; though I believe, from the first case that occurred in this district, that it is possible that the fever may be originated by infection.'

Dr. Nasmyth's treatment was so successful, his mortality being under 2 per cent., that we quote it at some length, and would recommend it to the consideration of those who attach great value to the treatment by cold baths. 'Different cases of this fever must be treated in different ways, according to the symptoms which are most developed, and according to the age and condition of the patient; but there are certain rules under which I should act in every case, if it were possible. Thus, in cases where I was certain the cause was bad drainage—and the most of the cases, I am confident, are the result of this—I would remove the patient to a place where there was no such evil, as I believe that the disease is aggravated, as well as caused, by the poison from this source; and I am sure that cases are longer in recovering where they continue in the locality of deficient sewerage arrangements. In my practice, where the people are of the lower classes, this is unfortunately not possible. The same dictum must be applied to the desirability of having a large, well-ventilated room with two beds in it, one to be used by night and the other by day, and having the patient carefully sponged once or twice a day. These things must be denied to the poor classes, however important they are. Complete disinfection of the stools is most important. What we have to treat in typhoid fever is an ulcer (or ulcers) of the intestines, which is accompanied by febrile symptoms more or less severe, almost invariably by diarrhœa, and sometimes by hæmorrhage. If we have an ulcer of the stomach, we endeavour to rest that organ by keeping the patient in bed, and supplying the organ, with its abraded wall, with food which will irritate it as little as possible. If we give solid food, we have great pain and vomiting, after which there is a considerable amount of relief in most cases. If we give milk and other bland nourishment, there is very little pain, and little or no vomiting, and the patient is receiving nourishment without much injury to the surface of the ulcer, which we expect in process of time, as a result, will heal. The same reasoning is applicable to the typhoid ulcer, and I have had occasion frequently to see aggravation of the fever, or a relapse from recovery, from some slight departure from the rule to give nothing but milk and beef-tea during the process of the fever, and for some time after, whatever medicines are given; and they can only be given to treat symptoms, and are of second-rate importance to the dietary. The patient very soon tires of milk, but it may be judiciously mixed with lime-water, especially where there is diarrhœa, with potash, soda, and Carrara waters. If ice is to be had, a small piece put into the milk is very grateful. When there is not much diarrhœa, beef-tea may also be given, and when there is exhaustion, both beef-tea and stimulants may have to be added; but milk I have always found to be the very best diet. Symptoms have to be treated by the ordinary remedies—quinine or salicin—for high temperature; cold sponging I believe to be better than either.' [The value of this interesting and important paper would have been greater if it had been accompanied by a clinical account of the cases.—*Rep.*]

Alex. Collie.

SANDS ON PERITYPHLITIS.

Dr. Henry B. Sands of New York, in a lecture on perityphlitis, reported in the July number of the *Annals of the Anatomical and Surgical Society*, stated that this disease, although by no means uncommon, is frequently overlooked or misunderstood. Further discussion of the subject was thought desirable, in order that the disease might be readily recognised and submitted to appropriate surgical treatment, and in order that those cases in which operative interference is necessary might be, if possible, distinguished from others, not unfrequent, which tend to spontaneous recovery, or which, at least, are likely to terminate favourably without the aid of the knife. This communication presents briefly the results of the author's own observation of perityphlitis, and refers to twenty-six cases of inflammation in the neighbourhood of the cæcum, in which the disease was circumscribed. Those instances in which general and fatal peritonitis rapidly follows perforation of the cæcum or vermiform appendix are regarded as belonging to a separate category. Of the twenty-six cases of perityphlitis thus defined, four only were observed in females. Of the entire number, only one occurred in hospital practice. The youngest patient was nine years of age, and the oldest fifty-four. As in all except three of these cases the disease terminated in recovery, and so the precise pathological condition could rarely be determined, the author thought it more profitable to separate his cases into the following four divisions: cases terminating in resolution without evidence of suppuration; cases of abscess terminating in spontaneous recovery; cases of abscess treated by operation; cases of abscess unopened and terminating fatally.

The first group comprises ten cases. The diagnosis of these cases was carefully and fairly made out, and in all the following symptoms were present: abdominal pain and tenderness, usually occurring suddenly, sometimes limited to and always most marked in the region of the cæcum; fever, indicated by an acceleration of the pulse and a rise of temperature, and the presence of an indurated swelling in the right iliac fossa. This induration was usually discovered within forty-eight hours after the com-

mencement of the disease, and generally began to subside soon after the abatement of the other symptoms. The very gradual subsidence of the induration indicated the inflammatory nature of the swelling, and forbade the supposition of its having been directly due to fæcal impaction. So far as the early symptoms were concerned, these cases could not be distinguished from those destined to go on to suppuration. The treatment of these cases consisted mainly in local depletion, the application of fomentations or poultices to the abdomen, and the internal administration of opium. Castor-oil, fluid extract of senna, or calomel, was administered in nearly all cases early in the disease. This practice is thought by the author to be judicious, for two reasons: first, to afford aid in diagnosis, by excluding fæcal impaction in the cæcum as a possible cause of the symptoms; and, secondly, because any accumulation of fæces in the intestine increases the patient's suffering, and is doubtless liable to aggravate the existing inflammatory mischief. Nothing, however, is to be gained by the repeated administration of purgatives.

The recognition of this first class of cases is important on account of the erroneous opinion widely entertained, that perityphlitis, when once established, must necessarily proceed to suppuration. Cases tending to recovery without suppuration are, according to the author's experience, by no means rare. Such cases usually owe their origin to the mere presence of hard and indigestible substances in the cæcum or appendix, to the extension of catarrhal processes in the cæcum through the intestinal coats, to the effects of injury, or to other causes which have not yet been defined.

The author cites three cases to prove that, even when a perityphlitic abscess is left to itself, its course is not always unfavourable, and that its contents may be discharged into the intestine, or possibly into the bladder, without any serious consequences. Indeed, it would appear that this mode of termination is adapted to secure the best possible result, for convalescence begins as soon as the abscess has ruptured; whereas, after an external opening has been established, either naturally or by incision, the suppuration is always more or less protracted and the cure correspondingly retarded.

The third group comprises eleven cases of abscess treated by operation. The characteristic tumour in the iliac region was present in all these cases, but in two only was any swelling discoverable on digital exploration of the rectum. In four instances there was fluctuation. In one of these the date of operation was not recorded, but it was late in the course of the disease, and the skin was extensively undermined; nevertheless, the patient recovered. In the three other cases the abscess was opened on the fifteenth day, on the seventeenth day, and at the end of the ninth week respectively. The last case, in which the operation was so long delayed, terminated fatally in septicæmia. In the remaining seven cases that were treated by incision, fluctuation was absent, and there does not appear to have been any one symptom indicating that suppuration had taken place; yet in only one instance did the knife fail to penetrate an abscess. Rigors, sweating, high temperature, acceleration of pulse, abdominal pain and tympanites, and an increasing extent, combined with diminishing firmness, of the abdominal tumour, are the chief signs which indicate the formation of pus. But these signs are not invariably present, and it would be a difficult matter, the author states, to say which of them is the most important. Although in the early stage of the disease it may be impossible to discriminate between the cases that are going to terminate by resolution and those that are to end in suppuration, the latter may usually be distinguished towards the close of the second week by the generally unfavourable condition of the patient, who seems to be getting worse instead of better; whereas, when resolution is about to take place, the later course of the disease is comparatively mild and favourable. In all the seven cases, save one, the abscess was found and opened. In this last the abscess burst spontaneously through the wound eleven days later.

In every case of suppuration in which an incision has been made by the author, the operation has been performed essentially in the manner recommended by Dr. Willard Parker. An incision from two to three inches in length, and usually parallel with Poupart's ligament, was made over the most prominent part of the tumour through the skin and subcutaneous fat. Subsequently, the deeper layers were divided until the abscess was reached, or until the fascia transversalis came into view. If fluctuation then became evident, the abscess was immediately opened, otherwise the fascia was penetrated in various directions by a hypodermic syringe until the seat of the abscess was discovered, when the operation was completed by introducing a narrow bistoury by the side of the needle. The direct passage of a bistoury into the swelling can be proper only when fluctuation is present and the pus lies near the surface. Extensive incisions should be avoided, as they have been known to be followed by hernial protrusion. An external incision of two inches will afford ample space, and the wound should grow narrower as it increases in depth, while the direct opening into the abscess need not be larger than will readily admit the forefinger, which should be inserted, in order that the extent of the cavity may be ascertained, and the presence of foreign bodies or fæcal concretions be detected. When such are found, they should always be removed, otherwise they may cause future trouble. Concretions were found in four out of the eleven cases treated by incision. All these bodies consisted of inspissated fæcal matter arranged in the form of concentric laminæ. In one instance, eight concretions, evidently formed in the appendix, were obtained from a single patient.

The author's notes include several cases in which perityphlitis occurred more than once in the same patient. The surgeon, it is held, should be guarded when giving a prognosis respecting the liability to recurrence of the disease after recovery has taken place by resolution. If the appendix contain a concretion, this will probably excite renewed irritation until the offending substance is discharged by suppuration.

Dr. Sands believes that the direct escape of fæcal matter into the peritoneal cavity, as a consequence of intestinal perforation, almost invariably results in diffused septic inflammation of the peritoneum, ending in speedy death. The vermiform appendix, before destruction of its coat, usually contracts adhesions to the peritoneum lining the iliac fossa; and the fæcal matters, instead of entering the serous sac, gradually pass into the loose connective tissue which lies outside the peritoneum.

Two cases are recorded in which the abscess terminated fatally without discharging its contents, either internally or externally. These two cases show that a perityphlitic abscess may extend for some distance behind the colon, and they suggest the propriety of inserting an aspirating needle

through the posterior wall of the abdomen when the symptoms of perityphlitis are present without the development of the usual iliac swelling. Should matter be found, it could then be evacuated by an incision like that usually made in the operation of colotomy.

W. Johnson Smith.

STRICKER AND SPRING ON THE MECHANICAL FUNCTIONS OF THE ACINOUS GLANDS.

Professor Stricker and Dr. Spina discuss (*Mediz. Jahrb.*, 1880, Heft iii) the prevailing theory that glandular secretion is the result of a diffusion of fluids from the blood- and lymph-vessels through the gland-cells into the gland-spaces, this diffusion being caused by special secretory nerves. Their main objection to the 'diffusion hypothesis' is based on the experiments of Ludwig, which show that under nerve-stimulation the submaxillary gland of the dog throws off, with a pressure of nearly eight inches of mercury, secretion which in a few minutes amounts to more than the bulk of the gland. This rate of secretion they hold to be incompatible with the slow stream shown in physical experiments on diffusion. And, while admitting that there may be vital processes which physical experiment does not discover, they submit that the facts adduced by Ludwig, Bernard, Heidenhain, and others, to prove the 'diffusion hypothesis', and the existence of special nerves to cause this diffusion, are not only compatible with, but are actually better explained by, the theory that secretion is due to the presence and action of 'contractile elements', in a manner which, by their experiments, they demonstrate. These experiments were conducted on the simple tubular glands of the membrana nictitans of the frog, and the web of the frog's foot. The membrana nictitans of the frog, excised and placed with certain precautions on a microscopic slide, shows, on electric stimulation, the following. (1) The contour of the acinus becomes constricted at intervals: and (2) the lining cells enlarge and push inward, till, with sufficiently strong stimulus, they close the lumen of the tube. On the cessation of the stimulus, both the contour and the cells of the gland gradually return to their original condition, more or less completely, according to the intensity of the current. Both the above changes took place also in the web of the frog's foot on stimulation of the sciatic nerve, not only in curarised and in non-curarised frogs, but also when the limb was amputated. They were also observed to occur spontaneously, rapid, but not so pronounced as those from electric stimulation. The extension of these results from the cutaneous glands of the frog to the submaxillary gland of the dog, the experimenters hold to be justified by the strong analogies they show to exist between these glands in form, in the character of their secretions, in their innervation, and in their reaction to atropine, to strychnine, and to nicotine; the increase of secretion under the two last being shown in a single most elegantly devised experiment. As to the constriction of gland-contour, it is for the purpose of their theory unnecessary to decide whether the 'contractile elements' producing it are muscular fibres or not. As to the enlargement of cells, at the moment of stimulation, they observed the normal striation of the cell-body broken up; and this movement, they hold, is altogether too rapid to be the result of diffusion. It is a movement due to the stimulation of special nerves, a movement of the same nature as that in muscular fibre, followed secondarily as a mechanical result by the penetration of fluid into the cell. This, they admit, is not according to the usual idea that nervous stimuli can cause contraction but never enlargement, an idea which they hold to be simply a tradition. Their theory, therefore, which they hold to be complete, with the single exception of the observation of the actual passage of the fluid through the basement-membrane of the gland, is as follows. On the nerve-stimulus, the cutaneous gland of the frog, by means of the two above-mentioned changes, empties its secretion, and recharges itself with fluid. On the relaxation of the stimulus, the cells return to their former state, and in doing so empty the fluid with which they are charged into the lumen, to be again expelled on stimulus.

James Anderson, M.D.

PONCET ON PTERYGIUM.

The etiology and pathology, no less than the treatment of pterygium, have long presented considerable difficulty to ophthalmologists. The affection, indeed, is apparently a slight one in itself; nevertheless, its tendency to encroach on the cornea, and thus seriously to interfere with vision, coupled with the fact that the operation for its removal is frequently followed by recurrence, besides being in itself not wholly free from danger, give it a greater importance than might otherwise be claimed for it.

A variety of theories have prevailed as to the etiology of pterygium since the time of Scarpa. At the present moment the generally accepted view is that first propounded by Arlt, and subsequently more thoroughly worked out by Horner. According to these observers, in every case of true pterygium either a primitive ulcer or a patch of ulcerated herpetic vesicles has at one time existed at the margin of the cornea. In this way the protecting epithelium, and probably the membrane of Bowman, have been destroyed, and a granulating surface has been left, to which the conjunctiva has in time become adherent. Under the influence of cicatrisation, it has subsequently become stretched and hypertrophied, and in this way has formed the body of the pterygium, between which and the sclerotic new layers of epithelium are later on to be developed.

This theory may suffice to account for the fact that pterygia are often found adherent by one point only to the cornea, while in the remainder of their course they rest on the conjunctiva beneath, though not in any way connected with it, save at their immediate origin. It leaves, however, quite untouched the problem of their steady onward growth towards the centre of the cornea, and of the tendency they exhibit to recur after removal.

Some recent researches of Professor Poncet, of Cluny (*Archives d'Ophthalmologie*, No. 1), are probably destined to throw a good deal of light on these points. This observer, having had occasion to examine after death a pterygium in an otherwise perfectly healthy eye, discovered the presence of large numbers of vibrios and spores within the ulcerated *cul-de-sac* upon the cornea, and under the cicatricial fold of conjunctiva. The microcosms in this case could not, on account of the minute precautions taken, be looked on as due to *post mortem* changes. Hence they must have existed during life, and if so, their presence in the peculiar situation in which they

were found would seem to afford a solution of many of the pathological difficulties connected with the growth and recurrence of pterygium.

According to Professor Poncet, these parasitical microcosms form a nidus beneath the folds of conjunctiva, and thereby maintain a condition of extremely chronic irritation. They work, as it were, underground, removing the fibrous tissue, atom by atom, surreptitiously, and without any visible inflammatory reaction, destroying the epithelium, and penetrating between the laminæ of the cornea, which probably offer less resistance to their corroding action than do the tough interlaced fasciculi of the sclerotic. Their progress is most manifest in the cornea, because the condition of that membrane is altered by the changes they induce, and is thereby rendered opaque. In the cornea the anatomical arrangement of the parts serves to account also for the fact that the vibrios do not spread over it entirely, but as a rule stop short of its centre. The cause of this lies in the arrangement of the corneal lymphatic vessels, the course of which they may be supposed to follow. The lymphatic vessels of the conjunctiva, as Waldeyer has shown, advance singly to the corneal limbus, and there form by the union of two or three branches a triangular plexus, offsets from which anastomose with the canaliculi, and form the summit of the corneal lymphatic triangle.

Thus far as to the shape and slow non-inflammatory growth of the corneal portion of the pterygium. As regards its large triangular body, a parasitical origin cannot be so distinctly shown. Its presence is more probably due, according to Poncet, to long-continued irritation, owing to a development of epithelial cysts within the folds of hypertrophied conjunctiva. Once the conjunctiva has formed a longitudinal fold, this elevated portion becomes extremely liable to irritation and hypertrophy from external causes. The change of the superficial epithelium into a cylindrical or calyciform variety, its grouping in pouches like racemose glands, the development of acini, all point to the genesis of a neoplastic growth, destined probably to lubricate the irritated mucous membrane. This modified epithelium fulfils a function similar to that of the sclerosed tissue on which it rests, namely, to facilitate the motions of the palpebral conjunctiva over its surface.

The therapeutic importance of the discovery of a possibly bacterian origin for pterygium will be at once evident. The treatment of the affection may henceforth be subdivided into the treatment of its corneal or smaller portion and its conjunctival or larger. For the first, the object must be to thoroughly free the cornea from the parasites which infect its superficial laminæ immediately around the imbus. Nothing short of the complete removal of the superficies of the affected portion will suffice. There need be the less hesitation felt in carrying out this treatment thoroughly, inasmuch as, owing to the destruction of the membrane of Bowman by the ulceration which already exists, the cornea can never under any circumstances regain its transparency. Antiseptic dressings and immediate application of boracic acid, or weak solutions of carbolic acid, are also necessarily indicated. As regards the conjunctival portion, complete removal is demanded, not merely of the triangular and affected portion, but also of the modified epithelium, which is found at a distance of two or three millimètres on each side of it. Whatever be the method of removal adopted, whether transplantation or abscission, care must be taken that the edges of the wound, when brought together by sutures, are clothed with perfectly normal and healthy epithelium.

LITTON FORBES, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. ECKHARD, DR.—Effect of Chloral Hydrate in Certain Forms of Artificial Diabetes. (*Archiv für Exper. Path.*, Band xii.)

2. GUTTMANN, G.—A New Remedy in Diphtheria. (*Berliner Klin. Woch.*)

3. ZELTWEG.—On the Treatment of Burns. (*Prager Med. Woch.*, Oct. 27th, 1880, and *Therap. Gaz.*)

4. TRIPIER.—On the Treatment of Vomiting after Food. (*Révue Thérapeutique*)

5. GUÉRIN, M. J.—Treatment of Infantile Diarrhœa by Charcoal in Milk. (*L'Union Med.*)

6. JEWELL, J. S.—Use of Bromine in Contraction of the Liver. (*Chicago Med. Rev.*)

7. Sulphate of Copper Crayons. (*Monthly Mag. of Phar.*, Jan. 1881.)

8. PARKER, W. T.—Injection of Sulphocarbolate of Zinc for Gonorrhœa. (*New York Medical Record.*)

9. Piscidia Erythrina in Preparatory Pains of Parturition. (*Chicago Medical Review.*)

10. LUTON, M.—Water-Diet in Typhoid Fever. (*Jour. de Thér.*, Oct. 27, 1880.)

11. PRIDEAUX, E.—The Effects of Bromide of Potassium in Strychnia-Poisoning. (*Lancet*, Jan. 1881, p. 52.)

12. MARCH, H.C.—Copaiba Resin as a Cure for Sciatica. (*Brit. Med. Jour.*, Dec. 1880, p. 1018.)

13. BUZZARD, T.—The Reason why Sciatica and Lumbago are often Cureable by Purgatives and Alkalies. (*Lancet*, Dec. 1880, p. 1007.)

14. BRUNTON, T. LAUDER.—The Action and Use of Certain Remedies employed in Bronchitis and Phthisis. (*Ibid.*, Jan. 1881, p. 4.)

15. SAUNDBY, R.—The Treatment of Asthma by Iodine locally applied. (*Brit. Med. Jour.*, Jan. 1881, p. 48.)

16. BRON, A.—Purgatives in Tetanus. (*Practitioner*, Dec. 1880.)

17. SAWYER, J.—Arsenic in Chorea. (*Brit. Med. Jour.*, Dec. 1880, p. 972.)

18. LATHAM, P. W.—Salicylic Acid in Acute Rheumatism. (*Brit. Med. Jour.*, Dec. 1880, p. 977.)

19. SAWYER, J.—Fuchsine in Chronic Albuminuria. (*Practitioner*, Jan. 1881.)

20. SAWYER, J.—Ingluvin in Sickness of Pregnancy. (*Ibid.*)

21. DABBS, G. H. R.—Ingluvin in Indigestion. (*Brit. Med. Jour.*, Jan. 1881, p. 86.)

1. *Eckhard on the Effect of Chloral-hydrate on certain forms of Artificial Diabetes.*—The author (*Arch. für Exper. Pathol.*, Band xii) confirms the statement of Mering and Musculus, that the urine of chloralised animals does not contain any sugar. In order to see whether the diabetic puncture was effectual in chloralised rabbits, the author subcutaneously injected into the animals a gramme (on the average) of chloral-hydrate, and very frequently, after two or three hours, another dose of a quarter of a gramme. The narcosis after this was deep, and lasted five or six hours. The urine passed three or four hours after the puncture was collected, evaporated, and the fermentation-test was applied to the watery extract of the residue, always with a negative result. Even after severe injury of the vermiform

process, diabetes was absent in chloralised rabbits, and in the majority of the experiments no noteworthy increase of the urine occurred. In two converse experiments, the author noticed the following results. After the vermiform process had been divided in the healthy rabbit, the urine showed itself strongly impregnated with sugar in the course of one hour. If the author injected subcutaneously one gramme of chloral-hydrate, the urine of the next hour still contained sugar, but not that of the second, third, and fourth hours. In a third series of experiments, the author endeavoured to decide whether the chloral-narcosis does also not prevent the diabetes caused by reflex action. For this purpose the author irritated, in rabbits, one of whose vagus nerves on the neck had been cut, the central end of the same at intervals from three to five minutes, each time for two minutes; in a normal animal, diabetes occurred after one hour's irritation; in chloralised animals, however, the urine did not contain any sugar, even after irritation, for several hours. In a dog, however, the urine of which was free from sugar after five grammes of chloral-hydrate, the inhalation of carbonic oxide produced distinct diabetes. In one patient with diabetes, the quantity of sugar in the urine decreased considerably after the use of chloral, whilst in another patient there was only a considerable diminution in the quantity of urine.

2. *Guttman on Pilocarpin in Diphtheria.*—Dr. George Guttmann, of Cronstadt, writes, in the *Berl. Klin. Woch.:* Knowledge of the physiological action of pilocarpin and of its effects upon bronchial catarrh, giving rise to moist *râles*, led me to believe that, administered in diphtheria, it might loosen the diphtheritic membrane through the induced abundant salivary secretion, while it would not excite any inflammatory condition. The result of the proposed treatment was, above all expectation, brilliant and striking. In April 1879 an entire family of seven fell sick, one after another, with diphtheria; three exhibited the severest typhoid symptoms. The second case I treated with pilocarpin in moderate doses. The next day I found a copious salivation, and fragments of pseudo-membrane floated in the expectorated matters. Pilocarpin was administered also to the other five patients. In addition, the usual general treatment was followed; quinine, tannin locally, gargles of lime-water and pepsin. The patients recovered in from two to four days. Since these first cases, down to August 1880, sixty-six cases of diphtheria (*rachenbräune*) have come under my care; fifteen exhibited the worst of the diphtheritic symptoms, of which, according to my previous experience, at least two-thirds would have certainly died; thirty-three would be termed bad cases, the membrane being extensive; the remainder were slightly affected. I gave pilocarpin to all; only in the first cases, quinine and gargles also; they recovered, as a rule, in periods of time varying from twenty-four hours to three days; of the fifteen worst cases, two recovered in nine and eleven days, the rest in two to five days. All patients who came early under treatment, while the pseudo-membrane was still loosely adherent, without exception were cured within twenty-four hours. The doubt that these cases were not truly diphtheritic is not to be raised, since they were examined with the utmost care, and in the worst cases the contagion could be distinctly traced. Under the action of the pilocarpin, not only were the membrane and infiltration dissolved in the salivary flow, but also the violent inflammatory condition yielded to its influence, the deeply reddened, dry, mucous membrane soon became moist, pale red, and in every respect of normal appearance. Led by these results, I prescribed pilocarpin in violent pharyngeal cases, angina aphthosa and tonsillaris, always with most happy results, the disease yielding in a short time. In two cases of violent tonsillitis, in which the tonsils were so swollen that water could be taken only with great difficulty, and scarification was positively indicated, not only did the swelling disappear, but the entire group of inflammatory symptoms, the one in twenty-four hours and the other in thirty-six. In the few cases of membranous croup that have fallen into my hands during the past fifteen months, pilocarpin has proved a faithful ally, and I believe it will prove as effective as in diphtheria of the fauces. Two cases of laryngitis stridula yielded promptly to the same drug, which is safer and more convenient than the usually prescribed emetic. Others have used pilocarpin under my advice, and agree with me in maintaining its excellence in diseases of the nature described. In the administration of this remedy I combine pepsin to combat the gastric catarrh usually present. My formula is as follows. ℞ Pilocarpini muriat., gr. ⅓-⅔; pepsinæ, gr. j-1¼; acidi hydrochlor., gtt. ii; aquæ dest., ʒ iiss. M. sig. A teaspoonful hourly for children. For adults—Pilocarpini muriat, gr. ss j; pepsinæ, gr. xxx; acidi hydrochlor., gtt. iij; aquæ dest., ʒ viij. S. Hourly, a tablespoonful. I have never observed any undesirable effects of the drug even when it has been continued until complete recovery, possibly because I give a small amount of generous wine after each dose.

3. *Zeltweg on the Treatment of Burns.*—The author, as physician in chief to a large iron mining and smelting company in Styria, has cases of burns very frequently presented for treatment, and has found the following method most successful. The wound is first cleaned (without opening the blisters) then disinfected with a 2 per cent. solution of carbolic acid, and covered with a thick furniture varnish prepared from linseed-oil and litharge, in which 5 per cent. of salicylic acid has been dissolved by warming. The varnish is allowed to dry and another coat applied; over this a layer of Bruns's cotton is placed, about 2-3 centimètres in thickness. The wound seldom suppurates, generally healing under the varnish, which is finally removed as a dry pellicle, no change of the dressing having been necessary. Should, however, suppuration be indicated by the setting in of fever, or by the occurrence of painfulness, the dressing is removed from this locality; if the spot be not over 5 centimètres in diameter, nothing further is done than to strew the moist surface with dry powdered salicylic acid; if larger, an opening is cut in the dressing, the salicylic acid is applied as before, and then covered with a fresh layer of cotton. The scars become by this method entirely smooth, white, and are not hypertrophied.

4. *Guérin on Treatment of Infantile Diarrhœa by Charcoal in the Milk.*—For children belonging to families in easy circumstances, M. J. Guérin mixes a certain quantity of Belloc's powder of charcoal with each milk meal—half a teaspoonful only at each meal. For the children of the working classes, Belloc's powder, which is a little dear, is replaced by very finely powdered, farina-like, ground bakers' charcoal. This powder mixes readily with milk, and children drink the mixture as though the milk were pure. In a very short time, sometimes on the first day, the stools change in consistence and odour, and, instead of being green, become blackish-

yellow. At the same time that this addition is made, M. J. Guérin dilutes the milk with one-third or one-half of sweetened water, and the children take it without repugnance or vomiting. M. Guérin has frequently seen children, exhausted by seven or eight days' uncontrollable diarrhœa, regain in two or three days the expression of health.

5. *Tripier on the Treatment of Vomiting after Food.*—Dr. Tripier states (*Rev. Thérap.*) that, in the vomiting after food occurring in phthisical persons and certain dyspeptics of the nervous order, a cure is obtained by the subcutaneous injection of a small quantity of cold water at the epigastrium; the colder the water, the more certain the effect. Dr. Leven announced, recently, at the Society of Biology of Paris, that he has succeeded in curing obstinate vomiting by an œsophageal sound passed into the stomach, connected with an electric wire, through which a continuous current reaches the terminal extremity of the sound.

6. *Jewell on the Use of Bromine in Contraction of the Liver.*—Dr. J. S. Jewell writes, in the *Chicago Med. Rev.*, that in a number of these cases he has found the persistent use of bromine internally to lead to good results. Its action is slow, and its use must be continued for months if it is to do good. His usual plan has been to give the bromine in solution in distilled water, ten drops of liquid bromine to one ounce of water. The dose of this mixture should be five drops in water three times a day to begin with. The dose may be increased one drop a day, until it is plain that the stomach will not easily tolerate a larger dose. If the stomach should become irritable, as a result of the use of the remedy, it may be necessary to reduce the dose to one or two drops, or even cease its use altogether for a time, to resume when the stomach will tolerate it again. It should be given in a considerable quantity of water, as it is likely otherwise to irritate the stomach. Of course, the use of bromine does not prevent the employment of most other remedies, such as the case may require from time to time. Under the use of bromine, he has usually seen, after a time, less disturbance in the gastric zone, less diarrhœa, a reappearance of bile in the discharges from the bowels, and a slow but general improvement in the condition of the patient.

7. *Crayons of Sulphate of Copper.*—According to the *Monthly Mag. of Pharm.*, Jan. 1881, the crayons of sulphate of copper employed in Germany appear to be a more elegant form of the preparation known to English pharmacy as *pierre divine*, a very ancient preparation, often demanded at the present time. According to the methods of Herr Steffen, the sulphate of copper, reduced to a coarse powder, is submitted to a moderate heat in a china capsule without stirring. The heat is continued until the mass thickens. When this occurs, it is possible to fashion it into little pencils, or into plates of all sizes and shapes, upon a flat piece of wood. Narrow crayons some inches long are thus easily made, and can be preserved for a long time without undergoing any modification. Alum, and a mixture of alum and sulphate of copper, can be treated in a similar manner. Herr Calmberg, of Darmstadt, proceeds in a slightly different manner. He mixes thoroughly four parts of pulverised sulphate of copper, and one part of borax, and heats the mixture carefully in a porcelain capsule. When the salts have lost a sufficient quantity of their water of crystallisation, the mixture becomes of the consistency of a pill-mass, and can be easily rolled into crayons of the desired dimensions. The presence of borate of copper in this preparation is, however, to be deprecated, as, this being an insoluble salt, the compound loses its caustic action wherever the borate occurs in the pencil. It is, therefore, preferable, if possible, to split the large crystals of sulphate of copper parallel to their longer axis, and then round off the edges and points on a flat piece of rough but fine sandstone. In this manner, a very fine quality of crayon of sulphate of copper can be prepared with a little practice, which appears to answer its purpose better than the salt, which has lost its water of crystallisation by the action of heat. The latter method seems to be preferred in the French pharmacies; in England, recourse is had to the old preparation, *pierre divine*, which is not pure sulphate of copper, but a mixture of the latter with alum, and sometimes other impurities.

8. *Parker on Injection of Sulphocarbolate of Zinc for Gonorrhœa.*—Dr. W. Thornton Parker, of Plymouth, Massachusetts, writes to the *New York Med. Rec.* extolling the following as an injection for gonorrhœa: ℞. Zinci sulphocarbolatis, ʒ j.; aquæ, ʒ vi.; mucilaginis acaciæ, ʒ j.; extracti opii aquosi, ℈ j. Use night and morning.

9. *Piscidia Erythrina for Preparatory Pains in Parturition.*—The editor of the *Chicago Med. Rev.* has found the fluid extract of Jamaica dogwood (piscidia erythrina) an excellent substitute for either opium or chloral, in controlling the nervous irritability dependent upon the preliminary contractions of the uterus in labour. It should be given in twenty to thirty drop doses, repeated hourly.

10. *Luton on Water-Diet in Typhoid Fever.*—M. Luton of Rheims, in the *Jour. de Thérapeutique*, Oct. 27, 1880, p. 770, gives an account of the manner in which, since 1869, he has been in the habit of using water-diet in the treatment of typhoid fever. It is understood that the disease should be taken at its commencement, the diagnosis being well and thoroughly made out. Generally, the patient has been purged and the bowels are acting fairly. The patient is then submitted to a strict diet; the only drink he takes is water, well filtered, if necessary, cooled with ice; and of this he may drink as much as he likes. At first the patient drinks the water with avidity, then in moderation, and finally with a certain satiety. Sometimes it is vomited at first, but is soon tolerated by the stomach. Under its influence the motions are at first more abundant, then they become more moderate and less fetid, and finally cease, to give place to constipation, which, however, is efficiently combated by injections of cold water only. M. Luton holds that the appearance of the cutaneous red spots marks the culminating point of the disease, after which the period of decrudescence and remission commences. Alimentation may then be commenced, light and careful feeding, composed of milk, especially ass's or mare's milk, or cow's milk diluted with water, if the two former kinds are not to be had; then the rest of the diet of the same character, according to the capability of the patient. According to M. Luton, the synthetic treatment of typhoid fever may be summarised as follows: 1. To furnish to the physiological vaporisation, which regulates the temperature of the body, a sufficient amount of material, viz., water; 2. By the dearth of ternary aliments, and generally by a spare diet, to hinder septic fermentations; 3. To induce as far as possible a special antiseptic action, which helps in the purification of the infected economy, and removes the unfavourable chances of an evolution abandoned to its free course;

4. Finally, to destroy, wherever it is found, the germ of the typhoid fever, whatever that may be.

11. *Prideaux on the Effects of Bromide of Potassium in Strychnia-Poisoning.*—Mr. Engledue Prideaux gives, in the *Lancet*, Jan. 1881, p. 52, the history of a case of strychnia-poisoning, in which an ounce and a half of bromide of potassium was administered in the space of a few hours as an antidote to three-quarters of a grain of strychnia. The spasms soon ceased after the first two doses of half an ounce each, and next day the woman was quite unable to raise herself, and hardly able to move a muscle; indeed, she seemed like a sheet of wet blotting-paper, and was almost completely paralysed; her urine had run away in great excess, and a large quantity of liquid fæces. Her pulse was slow and remarkably feeble. After three days she was able to raise herself, and had regained the power over the sphincters; and, on the fifth day, was able to sit up.

12. *March on Copaiba Resin as a Cure for Sciatica.*—In the *Brit. Med. Jour.*, Dec. 1880, p. 1018, is a note recording the value of copaiba resin, in a case of sciatica, under the care of Dr. H. C. March. The resin appears to act best in cases of purely neuralgic sciatica, where the pain persists after exciting causes, such as syphilis, gout, anæmia, constipation, or rheumatism, have been removed by appropriate treatment.

13. *Buzzard on the reason why Sciatica and Lumbago are often Curable by Purgatives and Alkalies.*—In the *Lancet*, Dec. 1880, p. 1007, Dr. Buzzard, in the course of a lecture upon infantile and adult paralysis, mentions the case of a child, one year old, who had lost the use of the right lower limb the day before he came under observation. The aspect was much that of infantile paralysis. The urine was highly acid, due to diet of Swiss milk. Believing that the loose connective tissues (really extensions of the lymphatic system) between the muscles of the thigh were loaded with uric acid, a few doses of citrate of potash were given, and the child was cured in a day or two. The fact that morbid deposits in these extensions of the lymphatic system may lead to such symptoms as these above described, and also to sciatica and lumbago, and be readily relieved by alkalies and purgatives, was originally suggested by Dr. Burdon Sanderson.

14. *Brunton on the Action and Use of certain Remedies employed in Bronchitis and Phthisis.*—Dr. Lauder Brunton, in a paper read before the Medical Society of Londou, and reported in the *Lancet*, Jan. 1881, p. 4, made a number of valuable observations on the *rationale* of the various symptoms occurring in the course of bronchitis and phthisis, and of the various modes of treating the same. Cough and expectoration are the most marked symptoms that attract our attention, and the action of so-called sedatives and expectorants. Cough may be excited by direct or reflex irritation of any branch of the vagus, and treatment consists in allaying or removing this irritation. Glutinous and saccharine substances in the mouth are well known agents, acting, probably, by soothing irritation existing at the root of the tongue and around the fauces; and, therefore, these factors being removed, the irritation of parts deeper than those affected by the remedies is lessened. The remedies themselves shield the irritated mucous membrane, or excite a flow of saliva and mucus, or possibly possess other remedial powers of which we are at present ignorant. A linctus, containing morphia or opium, has a distinctly sedative action on the peripheral nerves. In laryngeal phthisis, the cough is best treated by blowing through a glass tube, at the moment of inspiration, a powder composed as follows:—morphia, one-sixth of a grain; starch, two grains. Opium, introduced into the stomach, is very effective, but there is a danger of the digestive functions being upset. If we leave the cough alone, it exhausts the patient by the muscular efforts and want of rest, besides causing similar congestions of the heart, kidneys, and intestines, to those which we see occurring in the cutaneous veins in the face during the paroxysm of coughing. Hence we must strive to give opium in such combinations that the digestive functions shall not suffer. Such an one is the following mixture: Solution of muriate of morphia and dilute hydrocyanic acid, of each eighteen minims; spirit of chloroform and dilute nitric acid, of each one fluid drachm; glycerine, three fluid drachms; infusion of cascarilla or quassia, two ounces; a sixth part to be taken three or four times a day. To diminish congestion, potash has a marked effect. This is well seen in a lung suffering from consolidation and softening over a limited area. In ordinary health, crepitant *râles* will be heard limited to one spot. Should the patient catch cold, dry *râles*, extending for some distance round the irritated spot, will be heard, and the cough becomes troublesome, with very little expectoration. If potash be now given, especially the citrate, in a day or two the dry are replaced by moist *râles*, and the expectoration becomes freer, the cough at the same time subsiding. Now is the time to substitute for the potash another agent having a marked influence on the lungs, viz., nitric acid. If it be given too soon, the cough will again become harsh and dry; but, if the correct moment be chosen, then the cough yields and the expectoration diminishes. Potash, then, has a very marked influence in rendering the pulmonary secretion more fluid and abundant, while nitric acid has an opposite effect. A most powerful expectorant is a little warm food; and the comfort derived by chronic bronchitic patients from a cup of warm milk and a little biscuit or bread a quarter of an hour before rising, is most marked. Perhaps, however, the remedy, *par excellence*, is cod-liver oil, in most kinds of cough. The reason of its action is difficult to decide, but that it does greatly influence for good, is a fact beyond dispute. Dr. Brunton thinks it owes its curative power to its quality of nourishing the rapidly formed pulmonary cells. In the chronic vomiting of phthisis, alum has proved, in Dr. Brunton's hands, a most valuable agent.

15. *Saundby on the Treatment of Asthma by Iodine Locally Applied.*—Dr. Robert Saundby brings forward another case, in the *Brit. Med. Jour.*, Jan. 1881, p. 48, corroborative of the value of applying iodine along the course of the vagi nerves in cases of asthma. The patient had suffered for years, and had been unable to obtain relief. The first application so acted 'that he had not had such a good night's sleep for twelve months'. He slept all night, and was so surprised on waking in the morning that he got out of bed to look at his watch before he could believe it. Dr. L. Marshall, at p. 13, also reports a case cured, after ten years' suffering, by a few applications.

16. *Boon on Purgatives in Tetanus.*—In the *Practitioner*, Dec. 1880, p. 438, Mr. Alfred Boon issues a warning against the administration of purgatives in this affection, believing that their irritating effects act prejudicially upon the disease. The treatment that has frequently been followed by the hap-

piest results in Mr. Boon's practice, consists in large doses of chloral and Indian hemp. Castor-oil, in frequent small doses, is the only purgative allowed where it is essential to obtain relief of the bowels.

17. *Sawyer on Arsenic in Chorea.*—Dr. J. Sawyer, in the *British Medical Journal*, December 1880, p. 972, states his opinion that arsenious acid is the best drug we have for all forms of chorea, from whatever cause arising; treating, of course, at the same time the various causes by appropriate means. Dr. Sawyer believes the dose generally given far too small, and advises the drug to be pushed to the utmost, frequently giving a drachm of Fowler's solution (equal to half a grain of arsenious acid) thrice a day.

18. *Latham on Salicylic Acid in Acute Rheumatism.*—Dr. P. W. Latham, in the *Brit. Med. Jour.*, Dec. 1880, p. 977, enters into elaborate details as to the effects of salicylic acid in acute rheumatism. Doses of 60, 70, up to 100 grains of the pure acid have been given with only beneficial results, and no cerebral symptoms have arisen. In Dr. Latham's experience, salicylic acid is superior to salicin.

19. *Sawyer on Fuchsine, or Chlorhydrate of Rosaniline, in Chronic Albuminuria.*—In the *Practitioner*, Jan. 1881, p. 40, Dr. James Sawyer speaks favourably of the use of fuchsine, as proposed by Dr. Bouchut in 1879. Dr. Sawyer has used the drug in grain-doses, three or four times a day, in a pill, made up with extract of gentian and a little reduced iron. During the last twelve months all cases of chronic renal disease have been thus treated, and Dr. Sawyer is satisfied that the results have been more satisfactory than those yielded by any other mode of treatment.

20. *Sawyer on Ingluvin in Sickness of Pregnancy.*—Dr. James Sawyer (*Practitioner*, Jan. 1881, p. 40) has found ingluvin, in doses of ten grains thrice daily, effect a rapid and permanent cure in an obstinate case of the above. Before resorting to Copeman's operation, it was decided to give ingluvin a fair trial; the result fully justified the decision.

21. *Dabbs on Ingluvin in Indigestion.*—In the *Brit. Med. Jour.*, Jan. 1881, p. 86, Dr. G. H. R. Dabbs advocates the free use of ingluvin in other forms of dyspepsia than those arising during pregnancy. The best mode of administration he finds to be as follows. A commencing dose of ten grains at 5 or 6 A.M., is given in water; at 8 or 9 A.M. fifteen grains more are to be given; and, an hour subsequently, a breakfast of iced soda-water and milk; this finishing the day's drug-taking. On the second morning, fifteen grains are to be given early, and twenty grains three or four hours subsequently, before food; on the third day, two twenty-grain doses at the same hours. For the three following days ten grains are given before each meal, and then the drug is stopped altogether, as the vomiting (of pregnancy) ceases by this time, if amenable to the treatment. In many other forms of dyspepsia, Dr. Dabbs finds ingluvin particularly valuable. RICHD. NEALE, M.D.

MEDICINE.

RECENT PAPERS.

1. ENGEL, HUGO.—On Catarrhal Gland-Fever. (*Med. and Surg. Rep.*, Nov. 13th, 1880.)
2. PARISE.—On Passage of Putrid Gas into the Heart. (*Arch. Génér. de Méd.*, Nov. 1880.)
3. MACBRIDE, T. A.—On Auscultatory Percussion. (*Arch. of Med.*)
4. DRUMMOND, D.—A New Physical Sign of Aneurism of the Aorta.
5. TYSON, W. J.—Latent Pneumonia. (*Brit. Med. Jour.*, Dec. 1880.)
6. SAUNDBY, R.—Hysteria in the Male Sex. (*Med. Times and Gaz.*, Jan. 1881, p. 7.)
7. BRAMWELL, B.—The Differential Diagnosis of Cardiac Murmurs. (*Lancet*, Jan. 1881, p. 41.)
8. HAYMAN, H.—The Sleeping Girl of Turville. (*Lancet*, Jan. 1881, p. 66.)
9. MACLEAN, W. C., and COLLIS.—The Treatment of Sunstroke. (*Brit. Med. Jour.*, Dec. 1880, p. 1001.)
10. REID, J. C.—On Restoring the Heart's Action. (*Brit. Med. Jour.*, Dec. 1880, p. 144.)
11. SHUTTLEWORTH, G. E.—Foreign Bodies in the Stomach forming a Cast of the Cavity. (*Brit. Med. Jour.*, Dec. 1880, p. 1018.)
12. HUTCHINSON, JONATHAN.—The Arthritic Diathesis (*Med. Times and Gaz.*, Jan. 1881, p. 1.)

1. *Engel on Catarrhal Gland-Fever.*—Catarrhal gland-fever is the name proposed by Dr. Hugo Engel of Philadelphia (*Med. Surg. Rep.*, Nov. 13, 1880), for an affection which seems to be far from rare, but has not been described in any of the systematic works on internal medicine or books on surgery. He has seen nine cases, one of which was in consultation with Dr. S. D. Gross. There are but few complaints which, like the one in question, experience so similar a course. A person usually in perfect health, after an exposure to cold and damp, has chilly sensations, followed by increased temperature, fever, and a rapid pulse. Digestion is disturbed; the bowels are sluggish; the urine highly coloured and very acid. From the very beginning of the complaint the patient has pains all over, but especially in or near the inguinal regions, and most of the superficial inguinal and a few of the superficial abdominal glands on both sides of the body are enlarged and painful; these become painful, and the integument over them is reddened. All these symptoms continue for about three to five weeks, when one or two of the glands last-mentioned suppurate. Then the fever and the digestive disturbances commence to decrease, and then disappear, leaving the patient in a debilitated condition, from which he slowly recovers. The weakness in the lower extremities is especially apt to remain for a long time. While the glands on both sides are affected, only those on one side are apt to suppurate. No other glands of the body, except those alluded to, are ever attacked in this complaint. The disease cannot be mistaken for any other. The fever and the acute beginning, as well as the history of the case, distinguish it from simple scrofulous enlargement and suppuration of glands. The fact of the exposure and the number of glands involved separate it from the bubo of syphilitic or blennorrhœic origin. In lymphadenoma the number of white corpuscles is increased, which is not the case in the disease here described. There is no abortive treatment of any kind. The disease undoubtedly belongs to the domain of internal medicine. It seems to attack only adult men, and affects a patient but once. Almost without warning the disease will incapacitate an active man for at least six weeks for any work. As the disease will run its course we can only try to prevent suppuration of more than one gland, to hasten absorption of the morbid products of the others, and to accelerate convalescence. The moment we attack the glands more vigorously, to hasten either suppuration or absorption, we only prolong the case. In this disease the doctor as well as the

patient must have patience. Iodide of potassium and iodoform are useless; mercurial preparations do harm; jaborandi or other diaphoretics debilitate without any benefit; and a tonic treatment with iron, etc., from the beginning, only disturbs digestion the more.

2. *Parise on Sudden Death in Gangrene from the Passage of Putrid Gas into the Heart.*—In 1867 Dr. Parise sent a communication to the Academy, which was accidentally left unpublished, but is now placed on record in the *Archiv. Gén. de Méd.* (November 1880). Parise observed several cases of sudden death in gangrene of the limbs, and in each instance believed that the fatal termination was brought about by the entrance of putrid gas into the veins, and hence into the heart. Maisonneuve had previously (in 1853) published several cases of rapid gangrene, with the development of putrid gas in the veins of the affected member. But he believed that death was caused by blood-poisoning from this source. Parise, however, affirms that the putrid quality of the gas determines no septic action, but produces death in the same way that air accidentally entering the veins does. In the cases reported by the author the necropsies were made soon after death, and a very careful examination revealed the abundant presence of putrid gas in the right side of the heart and the principal venous trunks. Parise concluded, from the study of his cases, that surgeons should be on their guard against sudden accidents, especially in those cases of gangrene which follow a violent traumatism. Prompt action was necessary. Immediate amputation was the best curative procedure, and should be resorted to unless positively contraindicated by the condition of the patient. In the latter case deep incisions might prove beneficial; or the principal vein might be ligated or merely compressed. Amputation below the point of ligation or compression would have to be performed sooner or later.

3. *McBride on Auscultatory Percussion.*—This subject has been revived by Dr. T. A. McBride, in the *Arch. of Med.* He has devised an instrument made of hard India-rubber, and in shape something like the ordinary Camman's stethoscope without the mouthpiece. With this placed in the ears, percussion marks out the boundaries of the different viscera very accurately so far as has been tried. Its chief superiority over Camman and Clark's old instrument is, that it can be used by one person alone.

4. *Drummond on a New Physical Sign in Aneurism of the Aorta.*—At the meeting of the Northumberland and Durham Medical Society, on September 30th, Dr. Drummond mentioned a new physical sign in aneurism of the arch of the aorta. When a patient, the subject of thoracic aneurism, is made to inspire deeply, and then close the mouth, expiring slowly through the nose, a puffing sound is heard on auscultating the trachea above the sternum (best performed by the binaural stethoscope) synchronous with the systole of the heart. This sound at once ceases if, whilst the mouth is closed, the nostrils be also stopped, showing that it is an expiratory sound, caused probably by the sudden systolic expansion of the sac expelling air from the thoracic cavity. He has found it absent in cases of aortic valvular disease with great hypertrophy of the heart.

W. Watson Cheyne.

5. *Tyson on Latent Pneumonia.*—Mr. W. J. Tyson brought this subject before the Clinical Society (*Brit. Med. Jour.*, Dec. 1880), giving the history of several cases in which no pulmonary symptoms could be detected for several days after the patient had been attacked with an illness, which was clearly, from other symptoms, due to pneumonia. In the subsequent discussion, Dr. Andrew Clark and others also adduced instances occurring in their own practice, when, for many days, the ratio between the pulse and respiration, together with the high temperature, were the only guides to lead to the diagnosis of pneumonia, a diagnosis which, in a few days, was fully confirmed by the presence of physical symptoms. Dr. Clark expressed his belief that in such cases the disease attacked, first, the root of the lung, and so all symptoms were masked by the intervening mass of healthy lung; when, however, the disease spread to the surface, all obscurity disappeared.

6. *Saundby on Hysteria in the Male Sex.*—In the *Med. Times and Gazette*, Jan. 1881, p. 7, Dr. Robert Saundby reports the case of a house-painter, aged 30, married, who had been the subject of distinct hysteria for many years. When seen, his left hand was firmly clenched; there was no anæsthesia in either arm. After the application of two pieces of gold for twenty minutes, loss of sensibility took place in the opposite forearm and hand without any remission of the spasm. The gold was then transferred to the right arm for twenty minutes, on which sensation completely disappeared in the left hand and lower part of the forearm, but returned completely in the corresponding parts of the right arm. Silver had no effect. Both poles of constant current and unipolar excitation on an insulated stool were quite ineffective. The application of mild faradism produced very satisfactory results, and a splint, so applied as to extend the clenched hand, eventually effected a cure. [A large number of cases of hysteria, occurring in men, may be referred to in Section 1334-3 of the *Medical Digest*, and since the publication of this work the following have been recorded in the various journals:—Dr. Hicks (*Med. Times and Gaz.*, May 1877, p. 411); in boys, Thompson (*Med. Times and Gaz.*, Nov. 1877, p. 502); Roberts (*Practitioner*, Dec. 1879, p. 339. —*Rep.*]

7. *Bramwell on the Differential Diagnosis of Cardiac Murmurs.*—In the *Lancet*, Jan. 1881, pp. 41, 87, a lecture by Dr. Byrom Bramwell on this subject, illustrated by diagrams and sphygmographic tracings, is well worthy of careful perusal alike by students and by advanced practitioners. Any attempt at an abstract must necessarily be incomplete, and the lecture itself is too long to be given *in extenso*; therefore, those interested in the subject are specially referred to the original.

8. *Hayman on the Sleeping Girl of Turville.*—In the London Medical Record, of August 1880, a notice may be found of this case, which was under the care of Mr. Henry Hayman. In the *Lancet*, of Jan. 1881, p. 66, Mr. Hayman gives the sequel of the cure. The girl has opened her eyes, answers questions, takes food, and hopes soon to be able to sit up, her general health being in every respect quite regular.

9. *Maclean and Collis on the Treatment of Sunstroke.*—In the *Brit. Med. Jour.*, Dec. 1880, Dr. W. C. Maclean reports favourably of the results of his experience in the treatment of sunstroke by the cooling pack, the patient being enveloped in a wet sheet, fanned by a punkah, until the temperature has been reduced. This plan, carried out in one of the largest prisons of India, proved invariably successful. Dr. Collis seeks to attain the same end by

placing his patients in a refrigerating chamber, extemporised by screens and blankets, into which cooled air is blown by a fan similar to a winnowing fan, a basket of ice being placed over the head of the patient, which allows iced water to trickle over the body, as well as tending to cool the room. Dr. Maclean suggests that the Peninsular and Oriental steamers should be provided with such chambers, in case of need.

10. *Reid on Restoring the Heart's Action when it has Ceased.*—Dr. J. C. Reid gives, in the *Brit. Med. Jour.*, Dec. 1880, p. 1014, an interesting history of one of his father's cases, in which a child was laid out for dead, and in whom the heart's action was restored by a douche of hot water poured, from a height, over the cardiac region. In his own practice, a man, apparently dead, after a fit, was restored by the same method.

11. *Shuttleworth on Foreign Bodies in the Stomach forming Cast of the Cavity.*—Dr. Shuttleworth showed, at the meeting of the Manchester Medical Society (*Brit. Med. Jour.*, Dec. 1880, p. 1018), the stomach of an idiot girl, aged 10, who only ailed slightly a month before her death. A fortnight previous to the fatal termination she occasionally vomited after dinner, but her milk-porridge, morning and evening, was retained. She was walking about the day before her death, but at night she was violently sick, and next day died of peritonitis. The stomach measured 18 inches from cardia to pylorus; it weighed thirty-one ounces, and was distended by an almost solid mass of straw, twigs, fragments of matting, thread, etc., so interwoven and moulded as to form a cast of the stomach and duodenum. The large intestines were full of fæces.

12. *Hutchinson on the Arthritic Diathesis.*—In the *Med. Times and Gaz.*, Jan. 1881, p. 1, Mr. Jonathan Hutchinson commences a short series of clinical lectures upon this subject. He defines an arthritic subject as one 'who over and over again suffers from inflammation, more or less transitory, of his joints, and who is so liable to it that he knows what are the influences which are likely to produce an attack. It is thus quite clear that a tendency to arthritis, in this sense, is a constitutional one.' Speaking of gout and rheumatic gout, Mr. Hutchinson remarks as follows: 'I have already implied, and shall assert more explicitly soon, that I regard the attempt to separate rheumatic gout from true gout by an abrupt line as a violence to sound pathological doctrine'. In chronic rheumatism, or rheumatic gout, Mr. Hutchinson alludes to two peculiarities presented by the joints, which stand out before all others in their diagnostic value. They are—the dry grating caused by the removal of cartilage, and the development of lips, or rows of little nodosities developed on the line of junction between periosteum and cartilage, which nodosities, in severe cases, become confluent, and constitute projecting lips, often of considerable size. These nodosities can be readily detected in their early stage on the condyles of the femur, even before they cause any external deformity. To examine a knee, sit in front of the patient, and examine with both hands. Place the finger-tips of one hand flatly over the edges of the one condyle, and those of the other hand on the opposite condyle, and then direct the patient to bend and extend the joint slowly several times in succession. These condyloid crests are not to be expected in all cases; as a general rule, they are present only in those passed middle age. In the three large subdivisions of the arthritic family, gout is peculiar in having deposits of lithate of soda; rheumatic gout in having, in the young, ulceration of cartilage, and in the old, absorption of cartilage, with out-growths of bone; and acute rheumatism, in having synovitis, without permanent articular changes, and in being very prone to damage the heart. Are, then, these three maladies really related or not? In Mr. Hutchinson's opinion, the relationship is clearly established.

R. NEALE, M.D.

SURGERY.

RECENT PAPERS.

1. VERNEUIL.—On the Treatment of Cancer of the Tongue. (*Bulletins et Memoires de la Soc. de Chir.*, Dec. 1880.)

2. VERNEUIL.—On Yellow Pus. (*Arch. Génér. de Méd.*, No. 12, 1880.)

3. GRAEFE. — Ogston's Operation for Knock-Knee. (*Berliner Klin. Woch.*, Dec. 13, 1880.)

4. NANCREDE, CHARLES B.—On Hæmorrhage caused by the Acid Nitrate of Mercury. (*Philadelphia Med. Times*, Oct. 9, 1880.)

5. LEVIS, R. J.—Radical Treatment of Hydrocele by Injection of Carbolic Acid. (*Philadelphia Med. Times*, Nov. 6, 1880.)

6. PETERSEN.—On the Supra-pubic Operation of Lithotomy. (*Arch. für Klin. Chir.*, xxv, s. 752.)

7. KELSEY, CHARLES B.—On Cancer of the Rectum. (*Amer. Jour. of the Med. Sciences*, Oct. 1880.)

8. BOECKEL, M.—Lister's Antiseptic Treatment in Surgical Wounds. (*Gaz. Med. de Strasbourg*, Dec. 1, 1880.)

9. GOSSELIN, M.—A Case of Laparo-Enterotomy. (*Le Prog. Méd.*, Nov. 20, 1880.)

10. JACOB, ERNEST.—On the Danger of the Combined Effects of Ether and Opium. (*Brit. Med. Jour.*, Jan. 1881, p. 30.)

11. WHYTE, G.—On the Radical Cure of Hernia. (*Brit. Med. Jour.*, Dec. 1880, p. 1013.)

12. WHITEHEAD, WALTER.—On an Easy Mode of Passing Fine Strictures. (*Brit. Med. Jour.*, Dec. 1880, p. 1013.)

13. DAVIES-COLLEY.—On Removal of a Villous Growth from the Bladder by Perineal Section. (*Brit. Med. Jour.*, Dec. 1880, p. 1016.)

14. TAIT, LAWSON.—On Hydatids of the Liver Treated by Abdominal Section. (*Brit. Med. Jour.*, Dec. 1880, p. 975.)

15. BAKER, HENRY F.—On the Treatment of Webbed Fingers. (*Brit. Med. Jour.*, Jan. 1881.)

16. MCKENDRICK, COATS, and NEWMAN.—Report on the Action of Anæsthetics. (*Brit. Med. Journal*, Dec. 1880.)

17. BARKER, ARTHUR E.—On an Improved Method for Performing Dupuytren's Operation for Artificial Anus. (*Lancet*, Dec. 1880, p. 970.)

18. WHITEHEAD, WALTER.—On Nocturnal Incontinence of Urine and a Method to Tie in the Catheter. (*Brit. Med. Jour.*, p. 1019.)

19. HEATH, CHRISTOPHER.—On the Insidiousness of Rectal Cancer. (*Brit. Med. Jour.*, 1881, p. 11.)

1. *Verneuil on the Treatment of Cancer of the Tongue.*—In the December number of the *Bull. et Mêm. de la Soc. de Chir.*, is a report of a communication by M. Verneuil on the inutility and danger of any save operative treatment of epithelioma of the tongue. This disease, it is pointed out, has never been cured either by internal treatment or by topical applications. M. Verneuil states that he seldom meets with a case of lingual cancer which has not previously been treated by iodide of potassium. Such treatment, it is argued, cannot be justified. It is a gross error to think that iodide of potassium has any

efficacy in instances of true neoplasm, for, as is well known, this agent effects no amelioration in cancers of the lip, cervix uteri, and other organs. The diagnosis of epithelioma of the tongue, in the majority of cases, should not be difficult; and, through the recent teaching of M. Fournier, this affection may be readily distinguished from tertiary glossitis. There are, it is true, hybrid cases in which the cancer occurs in a subject of old syphilis, and in which the objective characters of the epithelioma are modified by the constitutional affection. This condition does not indicate any alteration of treatment, for the hybrid affection in its course, termination and prognosis resembles pure epithelioma, and should be dealt with in a like manner. M. Verneuil asserts that medicinal treatment of cancer of the tongue is not only fruitless, but also hurtful. Surgical removal of the disease is postponed, and so much precious time is lost. Iodide of potassium often excites troublesome and obstinate glossitis, and mercury stimulates the growth both of the primary epithelioma, and of any affected cervical glands. Chlorate of potash is as useless in cases of cancer of the tongue, as it would be if given for the relief of cancer of the cervix uteri. Epithelioma of the tongue, M. Verneuil holds, if taken in time, may be cured by operation. Mention is made of four cases of complete cure. In three of these cases the growth was small and superficial; in the fourth case a relapsing growth, together with a degenerated gland, was removed. When more than a third of the tongue has become involved, when the floor of the mouth is also affected, and when the disease has been progressing for longer than a year, the case is deplorably grave, and cannot then be treated by operation with any chance of success. Removal of lingual cancer, it is asserted, is not a serious operation when it can be performed by the mouth, and when the disease is recent and not extensive. Of two hundred such operations performed under these conditions by M. Verneuil, one only was fatal; and, in this instance, the death was due to pneumonia, and not directly to surgical action. Operation at an early stage of the disease is strongly recommended; and it is stated that between the early and favourable stage, and the advanced and hopeless stage, there is a long interval, at any period of which the surgeon may operate without risk, and with some prospect of permanent success.

2. *Verneuil on Yellow Pus.*—In 1854, M. Delore, of Lyons, described six cases of open wound in which the purulent discharge had been observed to be of a bright-yellow colour. This condition was regarded by M. Delore as one of very serious import, as each of his cases terminated fatally through pyæmia. M. Verneuil, in a recent contribution (*Arch. Génér. de Méd.*, No. 12, 1880) on this discoloration of pus, which he terms *suppuration orangée*, states that he has had many opportunities of observing it during the past twelve years, especially in 1870, during the siege of Paris. These cases, though not all fatal, yet confirm the opinion of M. Delore as to the gravity of the yellow staining of pus as a prognostic indication. This staining, M. Verneuil holds, is a serious phenomenon, not so much in consequence of any intimate relation that it bears to pyæmia, as from its being indicative of some dyscrasia. The phenomenon of bright-yellow suppuration has been observed most frequently in cases of extensive laceration and contusion of the soft parts of a limb, in association with comminution of bone. It usually occurs on the fourth or fifth day, and after the commencement of sloughing. It is, as a rule, a very transient phenomenon, and lasts but for two or three days. The staining is not diffused, but is due rather to the abundant presence in the pus of small and soft flakes of a bright-yellow colour. According to M. Robin, the yellow staining is the result of the presence of hæmatoidine and reddish-yellow amorphous colouring matter. The late M. Broca endeavoured to establish an analogy between yellow and blue suppuration by means of cultivation-experiments. These, however, whilst they invariably succeeded with blue pus, always failed with yellow pus. M. Verneuil has been led to seek for the predisposing cause of yellow suppuration in some constitutional affection of the patient. In his earlier cases that were observed in the crowded hospitals of Paris during the siege and the rule of the Commune, he found, in almost every instance, that the patient had been a drinker, and he was thus at first disposed to regard alcoholism as the sole predisposing cause of the staining. In some more recent cases, however, in which such suspicion could not be entertained, he was able to establish clear histories of other dyscrasiæ. Some of these patients were diabetic, others were the subjects of phosphaturia, and in one case the patient was suffering from the effects of repeated administration of morphia. It is concluded that yellow suppuration results from the association of certain forms of wound with a certain class of abnormal constitutional condition. With regard to treatment, M. Verneuil simply points out that this staining of purulent discharge indicates the necessity of frequent cleansing of the wound, and of directing attention to the state of the patient's constitution.

W. Johnson Smith.

3. *Graefe on Ogston's Operation for Knock-knee.*—In the Medical Society of Leipzig, Feb. 10th, 1880 (*Berl. Klin. Woch.*, Dec. 13th, 1880), Herr Graefe exhibited two cases of genu valgum. One had been operated on twelve weeks previously, and recovered perfectly under antiseptic treatment. The patient was allowed to walk in seven weeks, and, though he still wore a metal splint for precaution's sake, he could use the limb without any uneasiness, could bend the knee to 120 deg. actively and passively, and Herr Graefe, who was treating him with daily passive movements, expected a much greater mobility. The second patient was operated upon for genu valgum of the left side two years ago, at the age of sixteen, and remained in hospital about eight weeks. The cure was satisfactory, the motion good, and he at once resumed his fatiguing occupation of house servant. No splint was used, yet the patient felt no harm. Flexion and extension were well performed, the knee being easily bent beyond a right angle. Neither relapse nor shortening was observable; so much so, that he wanted a medical certificate that an operation had been performed, to shield him from being compelled to enter the army. Herr Graefe concluded by discussing the arguments for and against the operation. The objection of its danger, in comparison with the slight inconvenience caused to the patient by his deformed leg, and especially as contrasted with other operations, was answered by the statement that, while such an operation is a folly, save under antiseptics, it is with their aid no more perilous than the other proposed osteotomits. The operation *per se* cannot be blamed for the pyæmia and suppuration that have occurred in some of the cases. It is also stated that it constitutes too serious an interference with the delicate mechanism of the knee-joint. Admitting that there

is a considerable interference with the joint, it by no means follows that harm should result from this, if reasonable care be taken in the after-treatment of 'Ogston-knees'. Considering the short time the operation has been on its trial, it is premature to draw any conclusions; but the coming decennium, and its experience, may enable this question to be solved. It has been, in the third place, objected that the interference with the epiphysal cartilage in its linear division by the saw may impair the growth of the limb in adolescents and in rickety children. This, however, is a theoretical statement, resting on no proof whatever. It is true that total or partial destruction of an epiphysal cartilage stops the growth of a bone; but whether a linear antiseptic division of the cartilage, accompanied by mere vertical displacement, without separation of continuity, will have the same effect, is a point that future experience alone can decide. Herr Graefe's cases seem to point to this and the previous objections as being incorrect. At the conclusion of the communication, Herr Thiersch demonstrated the well-known preparation, showing the state of parts of the femur five weeks after an Ogston's operation.

4. *Nancrede on Hæmorrhage caused by the Acid Nitrate of Mercury.*—Dr. Charles B. Nancrede reported to the Philadelphia County Medical Society, Sept. 8, 1880 (*Phil. Med. Times*, Oct. 9, 1880), an interesting case of hæmorrhage caused by the acid nitrate of mercury, which illustrates the disadvantage of applying this remedy to all sores upon the penis. He had been called in consultation to see the case, and found an alarming hæmorrhage from the dorsal vessels of the penis, which came on after an application of this caustic. He was obliged to secure both dorsal arteries by acupressure. There was subsequently some return of the hæmorrhage, but it was speedily checked. Sloughing also followed, which opened the urethra, and required a plastic operation. The patient finally recovered, and has had a healthy child, so that in all probability the first lesion was not syphilitic.

5. *Levis on Radical Treatment of Hydrocele by Injection of Carbolic Acid.*—At a meeting of the Philadelphia Academy of Surgery, June 7, 1880, Dr. R. J. Levis stated that in 1872 he had begun to treat hydrocele by carbolic acid injections, because a more plastic grade of inflammation than that obtained by ordinary injections was required, and because incision only accomplished a cure through suppuration. His method is to withdraw the fluid by an ordinary trochar, and then introduce the long nozzle of a syringe through the trocar into the vaginal sac. By this means the carbolic acid is thrown into the cavity, and there is no danger of its being injected into the cellular tissue of the scrotum. The carbolic acid crystals are merely liquefied by slight heat, or by a few drops of glycerine. To keep the injecting fluid ready for use at all states of temperature, about ten per cent. of glycerine or water may be added to the crystals. The amount of carbolic acid which Dr. Levis injects is one-half a fluid drachm, and this is allowed to remain in the vaginal tunic. The operation is almost, if not entirely, painless, because of the local anæsthetic action of carbolic acid. The patients sometimes exclaim at the moment of introduction, but have a sensation of numbness rather than of pain. The pain, when tincture of iodine is employed, is much greater. Care should be observed to allow no acid to flow upon the external surface of the scrotum, for pain and inflammation will follow such contact. After the injection the patient is permitted to walk about the house until the weight and slight soreness of the scrotum cause him to lie upon a bed or lounge. The results of this method of treatment are excellent, for undue inflammation does not occur, there is no marked pain, and a radical cure generally ensues. Dr. Levis has never seen suppuration or sloughing follow this manner of dealing with hydrocele.

6. *Petersen on the Suprapubic Operation of Lithotomy.*—Dr. Petersen (*Arch. für Klin. Chir.*, Band xxv. s. 752) considers that the dangers of the high operation for stone, which consists in injury of the peritoneum and infiltration of urine, may be prevented by modern methods of operation. He has found, by observation on eleven bodies, that when Braune's method is followed by the gradual distension of the rectum, the full bladder is dragged further forward and upright, and the peritoneum thus rises considerably with its anterior fold, much more so than when this is not the case. Petersen, therefore, has recently always operated in such a manner, that he not only fills the bladder to the utmost, but the rectum also, by the introduction of a rectal tube, and the gradual injection of water of the same heat as the body, so as to dilate it. In his last two operations, Peterson did not even see the peritoneum; while, in his earlier operations, he was obliged to push it upward. He considers that the danger of infiltration of urine may be overcome by careful suture of the bladder with fine catgut, under complete antiseptic precautions. The special indications for the high operation he sets out as follows: (1) The presence of a large hard stone; (2) encapsuled stone; (3) stone in diverticula, behind the prostate gland; (4) enlargement of the prostate gland; (5) hæmorrhoids; (6) fat subjects; (7) tumours of the bladder; (8) impermeable stricture (with the assistance of posterior catheterisation.

7. *Kelsey on Cancer of the Rectum.*—Dr. C. B. Kelsey of New York (*New York Med. Jour.*, Dec. 1880), has made an analysis of 140 cases of excision of cancer of the rectum. This collection of reports was undertaken with a view to determine, if possible, the relative value of excision, as compared with lumbar colotomy. The following conclusions are drawn: 1. The fatal results which have thus far been recorded as following this operation (excision) nearly all occurred in cases where, from the extent of the disease, such a result was not improbable. 2. When the disease reaches above three inches, or involves neighbouring parts to such an extent as to render its entire removal without injury to the peritoneum questionable, the operation is contraindicated. 3. Although there have been a few cases of cure, such a result is so rare as not to justify the exposure of the patient to the risk of immediate death which attends the attempt to remove extensive cancerous disease. 4. The operation is chiefly valuable as a palliative measure, and as such it is applicable to cases where the disease has not made extensive progress. 5. As a palliative measure, in proper cases, it compares favourably with the results of lumbar colotomy, both in prolonging life and in relieving pain.

8. *Boeckel on Lister's Antiseptic Treatment in Surgical Wounds.*—The author (*Gaz. Méd. de Strasbourg*, Dec. 1st, 1880) gives a table of statistics of major amputations performed by himself, some with and some without antiseptic precautions. Fifteen amputations of the thigh were performed antiseptically with four deaths, and seven were treated otherwise with three deaths; eighteen amputations of the

leg were treated antiseptically without a death, and nineteen treated in other ways with four deaths. In going into the causes of death, the author concludes that in neither case can the deaths be attributed to the method of dressing employed. Nevertheless, he thinks that the advantage is decidedly with the cases treated antiseptically, on account of the rapid healing, the absence of fever and of suppuration, and the rarity of the dressings in these cases. He mentions the occurrence of aseptic fever in a few cases, and, with Edelberg, he attributes this to absorption of blood from the wound. W. WATSON CHEYNE.

9. *Gosselin on a Case of Laparo-Enterotomy.*—The following case, under the care of M. Gosselin, is reported in *Le Progrès Méd.*, Nov. 20th. A woman, aged 64, was admitted into La Charité with severe abdominal pain, tympanites, and constipation, of some days' duration. A slight swelling could be felt in the left crural region; and, after a dose of scammony and calomel had failed to produce any action of the bowels, this was cut down upon, and found to be omentum. The measure failed to afford any relief, as did also purgatives, and enemata given through a long tube. Three days after the first operation, as the patient was becoming exhausted, laparo-enterotomy was performed, the incision being made in the right iliac fossa. A large quantity of fæces was thus evacuated, and the patient much relieved; but death took place four days afterwards, erysipelas having appeared round the wound. At the *post mortem* examination, it was found that the sigmoid flexure and upper part of the rectum formed an immense cylinder, occupying the median line of the abdomen, at its upper part inclining towards the descending colon. The distending material was semi-fluid fæces; and the mucous coat of the gut at the affected part was deeply congested, but not ulcerated. No tumour or any form of constriction could be found. The circumference of the dilated part was 33 centimètres (13 inches). In some remarks following the report, it is thought that the prolonged constipation caused paralysis of the intestine, and hence obstruction. [Might not that condition have been caused by fatty degeneration of the muscular wall of the bowel?—*Rep.*]

T. F. CHAVASSE.

10. *Jacob on the Danger of the Combined Effects of Ether and Opium.*—In the *Brit. Med. Journ.*, Jan. 1881, p. 30, Dr. Ernest H. Jacob utters a word of warning against the use of opium before giving ether in surgical operations. Several cases have occurred in which death resulted during inhalation of ether, in patients under the influence of opium. In the tables lately published, out of six deaths directly attributed to ether, two were cases of hernia, in which it is more than probable the patients had previously freely taken opium. Morphia and ether are strongly spoken against by Dr. Kappeler, but he allows that morphia and chloroform are less open to objection.

11. *Whyte on the Radical Cure of Hernia.*—Dr. G. Whyte, in the *Brit. Med. Journ.*, Dec. 1880, p. 1013, commenting on the corkscrew instrument used by Mr. Spanton, and described in the LONDON MEDICAL RECORD of January, recommends a method he has adopted with success in several cases, whereby all metallic sutures are avoided. Dr. Whyte employs a catgut ligature, which is laced in and out of the inner and outer pillars by the aid of curved needles, just like an ordinary boot-lace. The ligature is cut short and left in the parts. In the case of a lad ten years of age, Dr. Whyte cured a double congenital inguinal hernia by this plan of procedure.

12. *Whitehead on an Easy Mode of Passing Fine Strictures.*—In the *Brit. Med. Journ.*, Dec. 1880, p. 1013, Mr. Walter Whitehead recommends the following mode of dilating fine strictures. A filiform bougie is passed through the stricture; another bougie is then passed down to the stricture, and the first bougie withdrawn an inch or two, and then both bougies are passed through the stricture simultaneously. A third may also be passed in the same manner, the first two being partially withdrawn; and then the third, already waiting at the strictured part, will travel through the stricture in company with the other two, which still retain their position within the stricture. Three fine bougies having passed, there will be no difficulty in using a No. 2 or No. 3 on a subsequent occasion.

13. *Davies-Colley on Removal of a Villous Growth from the Bladder by Perineal Section.*—The *Brit. Med. Journ.*, Dec. 1880, p. 1016, records a paper, read by Mr. Davies-Colley before the Clinical Society, upon a successful case, in which the bladder was opened, as in lithotomy, and a tumour removed, having a pedicle one-tenth of an inch thick and two inches long, terminated by branching filaments from half an inch to three-quarters of an inch long, growing from the posterior wall of the bladder. The man made a speedy and perfect recovery. A discussion followed, and several somewhat similar cases were referred to by the different speakers; one of special interest being that of an elderly gentleman, with obscure vesical symptoms, who spontaneously passed a villous growth *per urethram*, with immediate relief to all his troubles.

14. *Tait on Hydatids of the Liver treated by Abdominal Section.*—A case is reported in the *Brit. Med. Journ.*, Dec. 1880, p. 975, followed by a discussion, in which Mr. Lawson Tait opened the abdomen, and cut into healthy liver-tissue, to arrive at a huge hydatid cyst, from which two gallons of hydatid fluid and cysts were evacuated. The wound was stitched to the edges of the abdominal walls, and a wide glass drainage-tube inserted. The patient was convalescent in ten weeks.

15. *Barker on an Improved Method for Performing Dupuytren's Operation for Closing an Artificial Anus.*—In the *Lancet*, Dec. 1880, p. 970, Mr. Barker illustrates with diagrams the mode by which he successfully operated to close an artificial anus. A man, aged 25, had suffered from fæcal fistula for more than a year. A finger passed through the fistula felt by its tip the usual spur of mucous membrane that juts up, separating the stomachal and anal portions of the gut. This 'spur' was nipped between a pair of Wells's artery-forceps, after the fistula had been enlarged, and four days subsequently a considerable portion came away between the blades of the forceps. The same day the forceps was again applied, taking up more of the spur in its grasp than on the previous occasion. The catch-forceps came away after three days, bringing a larger piece of the spur of mucous membrane in its grasp than on the former occasion. It was attempted to fill the intestinal hole, until cicatrisation was completed, by a thin India-rubber valve inside the bowel, retained by stitches, which Mr. Barker intended cutting, and so allowing the piece of India-rubber sheeting to pass *per anum*. However, the valve did not long act well, and was removed. The fistula subsequently healed very rapidly, and closed completely within eight weeks of the operation. [In a case reported by Mr. Duncan (*Lancet*, July 1873, p. 9) the septum or spur was cut away by iron loops; then the mucous membrane was

dissected off all around the abnormal orifice for more than half an inch and invaginated; the raw surface was then drawn together by six catgut sutures, cut short; next, the cutaneous margins were freely pared and brought together by silver wire ligatures. A perfect cure resulted. Mr. Cowell (*Lancet*, April 1877, p. 608) reports a radical cure of artificial anus in a child aged 4 years. In the LONDON MEDICAL RECORD, 1879, p. 211, three cases of Professor Schede are reported, in which enteroraphy was performed for the cure of artificial anus, two of which were discharged cured, the third dying of pulmonary embolism after perfect union of the intestines had taken place. These cases are referred to, because Mr. Barker states that he had only heard of one attempt to cure the malady, and that proved fatal.—*Rep.*]

16. *McKendrick, Coats, etc., on Anæsthetics in Surgery.*—In the *Brit. Med. Journ.*, Dec. 1880, p. 957, Drs. McKendrick, Coats, and Newman give the results of their elaborate researches upon the action of anæsthetics, undertaken at the request of the Scientific Grants Committee of the British Medical Association. The whole report should be carefully studied by every medical man, as no abstract can convey an accurate conception of its value. Ether was found in every respect except the length of time required for its administration, superior to chloroform, which most seriously affects the heart, instantly causing the right ventricle to become distended. Search was made for another anæsthetic, and ethidene-dichloride appeared to be the most promising as compared with chloroform. The two anæsthetics were each given in fifty cases taken at random. Rather larger quantities of ethidene were consumed per minute, but chloroform required a minute longer to produce its effects. Sickness was greater after chloroform. Chloroform affected the heart and lungs most seriously. Ethidene has this advantage over ether —that smaller quantities are required; in point of safety, both anæsthetics appear to be equal.

17. *Baker on the Treatment of Webbed Fingers.* —In the *Brit. Med. Journ.*, Jan. 1881, p. 48, Mr. Henry F. Baker suggests a very easy mode of treating this troublesome condition, carrying out Mr. Lister's suggestion in a very effective manner. A piece of wire, of gold or silver, shaped like a ring, pointed at one end, and with a hollow cup at the other, is passed through the web, and then pinched so that the cup-shaped end receives the point. When the hole has cicatrised, the remainder of the web may be cut through with one sweep of the knife, and the fingers dressed separately until healed.

18. *Whitehead on Nocturnal Incontinence of Urine, and a Method to tie in the Catheter.*—Mr. Walter Whitehead (*Brit. Med. Jour.*, Dec. 1880, p. 1019) suggests an ingenious plan of securely fixing a catheter or bougie in the urethra. An ordinary ring pessary, with four equidistant tapes attached, is passed over the penis and scrotum, two tapes being passed between and round the thighs, and the other two round the back, and the four made to cross in front and behind as a spica bandage, the free ends being tied in pairs on each side of the body. By means of this apparatus, Mr. Whitehead keeps a bougie-à-boule in the bladder in cases of nocturnal enuresis, the bougie being provided with rings at its extremity, in which to fasten silken threads, attached to the ring. Boys aged seven could easily be taught to introduce the bougie themselves, if it were necessary to remove it for the sake of micturition during the night. The stimulus of the bougie, during sleep, acts so as to cause the sphincter to maintain its normal contraction.

19. *Heath on the Insidiousness of Rectal Cancer.* —In the *Brit. Med. Jour.*, Jan. 1881, p. 11, Mr. Christopher Heath, in the course of a paper on colotomy, says as follows. 'It is remarkable how insidious the symptoms of cancer of the rectum are; so that patients complain of dyspepsia, diarrhœa, and vague uneasiness about the pelvis for some time before their attention is specially directed to any alteration in the size of the motion, or any difficulty in defæcation. I know that one of our leading physicians, who very properly insists upon making a rectal examination when the symptoms of dyspeptic diarrhœa cannot be otherwise explained, has on several occasions thus detected unsuspected cancer of the rectum; and it has happened to myself, in explaining the case of a patient suffering from early cancer of the rectum to her friend, to light up a suspicion of the presence of the same disease in the friend, which turned out to be only too true. Cancer may have attained very considerable proportions without producing the small fæces which are erroneously thought to be characteristic of the disease; and the tendency to diarrhœa, which is so often present, prevents, for the most part, any just estimation of the calibre of the bowel.'

RICHARD NEALE, M.D.

PATHOLOGY.

RECENT PAPERS.

1. ZIEGLER.—The Causes of Contracted Kidney, and the Diagnosis of Different forms of Nephritis. (*Deut. Arch. für Klin. Med.*, Band xxv.)

2. POPOFF, L.—Results of Ligature of the Ureters, and of the Renal Arteries. (Virchow's *Archiv*, Band lxxxii, Heft 1.)

3. POPOFF, L.—The Natural Pathological Injection of the Bile-Ducts, and certain other Pathological Results of Ligature of the Ductus Choledochus. (Virchow's *Archiv*, Band lxxxi, Heft 3.)

4. SOTNITSCHEWSKY.—The Condition of the Arterioles in Granular Atrophy of the Kidney. (Virchow's *Archiv*, Band lxxxii, Heft 2.)

5. TAPPEINER.—Tubercular Infection in the Dog. (Virchow's *Archiv*, Band lxxxii, Heft 2.)

6. ACKERMANN.—Hypertrophic and Atrophic Cirrhosis of the Liver.

7. COMBY, M.—Aphasia without Broca's Lesion. (*Le Prog. Méd.*, No. 49, 1880.)

8. RIPLEY.—Primary Cancer of the Stomach. (*New York Med. Rec.*, Dec. 18, 1880.)

9. BUDD, G.—The Pathology of Gout. (*Brit. Med. Jour.*, Dec. 1880, p. 972.)

10. BRAMWELL, B.—The Histology of Locomotor Ataxy. (*Edin. Med. Journal*, Jan. 1881.)

11. BETZ, F.—On the Nature of the Green Vomit. (*Mémorabilien*, Oct. 6, 1880.)

12. WILLARD, F.—On Early Changes in Hip-Joint Disease. (*Boston Med. and Surg. Jour.*, Nov. 4, 1880.)

1. *Ziegler on the Causes of Contracted Kidney, and on the Diagnosis of Different Forms of Nephritis.*—Ziegler (*Deut. Arch. für Klin. Med.*, Band xxv, sec. 586) says the chief factor in the causation of granular kidney is not the degeneration of the parenchyma, but the non-occurrence of its regeneration which can restore it to its integrity. Simple fatty degeneration, which occurs in various diseases, in anæmia, and may be caused experimentally, has not succeeded in affording any explana-

tion of granular atrophy. He starts with the investigation of senile atrophy of the kidney, in which, obviously in consequence of generally diminished nutrition, there occur enfeeblement of the circulation, wasting of the glomeruli, first at the periphery, then disappearance of the tubules connected with them, and, finally, more or less extensive small-celled infiltration. The arterio-sclerotic form of granular atrophy stands next to this. Here, the most important changes are wasting of the glomeruli, collapse and atrophy of the tubules, and, finally, hyperplasia of connective tissue. Fatty degeneration occurs secondarily, but the cells become smaller, like those of the looped tubes; most contain cylinders. The vessels are widened, and this seems to be the cause of the increase of urine. The embolic form is similar to the latter. By obstruction to the greater circulation, and increase of the heart's action, the same changes take place in the kidney, which apparently originate in wasting of the glomeruli, perhaps in consequence of exudation into the capsules. Great interference with the nutrition of the kidney of different sorts may lead to extensive degeneration of the parenchyma; but regeneration takes place if the glomeruli have not been involved, or if the destruction be not too great or continued. When the latter occurs, atrophy results; as occasionally happens, for instance, in acute jaundice. It may also follow parenchymatous degeneration, as seen in the small patches of atrophy on the surface of the large white kidney; but general atrophy occurs only rarely. The glandular degeneration, in all those forms which he groups together as interstitial indurative nephritis, is of secondary importance. The atrophy of the tubules is the result of their abolished function, of the destruction of the glomeruli, which latter depends upon fibrous hyperplasia of the capsules, or on a concomitant disease of the arterial system. Besides the form of atrophy from compression, he gives three groups of atrophy of the kidney. The first, of which the type is the arterio-sclerotic form, is dependent on simple interference with the circulation, and must be distinguished from the inflammatory forms. In the second, he classes all the degenerative processes which are followed by destruction of the epithelium (embolism, temporary ligature, chemical irritants), excluding regeneration. In the third group (interstitial nephritis), there is a combination of epithelial degeneration with other processes—cellular infiltration, proliferation of the epithelium of the capsules and glomeruli, wasting of the vascular tufts. Both the latter groups—which differ only quantitatively, not qualitatively, as in both there are epithelial degeneration and hyperplasia of connective tissue—are, nevertheless, to be kept distinct, as there is no 'identical pathological principle', as Weigert thinks.

2. *Popoff on the Results of Ligature of the Ureters and of the Renal Arteries.*—Dr. Leo Popoff's researches (Virchow's *Archiv*, Band lxxxii, Heft 1) were undertaken with the view of throwing light on the pathology of uræmia. On examining the brains of animals whose ureters or renal arteries had been tied, he found around the smaller vessels, within the lymph-sheaths, especially frequent at their bifurcations, hyaloid masses, which he believes to be the result of the breaking-down of blood-corpuscles, identical with what occurs when urea is added to blood under the microscope. In other animals in which the gall-ducts had been tied, the same masses were found *within* the vessels. This difference he explains by the poison in the first instance being derived from the tissues, while in the second it was circulating in the blood.

3. *Popoff on the Natural Pathological Injection of the Bile-Ducts, and on certain other Pathological Results of Ligature of the Ductus Choledochus.*—Dr. Leo Popoff (Virchow's *Archiv*, Band lxxxi, Heft 3) describes a network of biliary capillaries, filled with bile-pigment, analogous to those obtained by injection after Chrzonsczewsky's method, in the livers of dogs after ligaturing the ductus choledochus. He also obtained similar appearances in the liver of a rabbit, killed by repeated subjection to a heated atmosphere. He argues that, if they were lymph-vessels, filled with bile-pigment by absorption, the pigment might be traced within the lymph-sheaths of the arterioles, but there was none to be seen there. They were evidently capillaries with proper walls, and not spaces (Hering). They originated from the liver-cells by being continuous with processes (Kalatschinsky), and in some cases the row of pigment could be traced into the nucleus. He cannot decide whether other of the processes are continuous with nerve-fibres (Pflüger). Besides these changes, he found proliferation of the connective tissue around the lobules, which sent processes between the liver-cells, atrophying them, and giving rise to the appearance of newly formed bile-ducts (Charcot). There was no fatty degeneration, and simple atrophy and vitreous degeneration (Charcot) occurred in only one case. In a dog which lived one month and eight days there was a perforating ulcer of the duodenum, which Popoff ascribes to the possible effects of traumatism, leading to ecchymosis and the absence of the protecting influence of the alkaline bile. In other cases he found ecchymoses in the intestine, and these have been described by Teillais in similar experiments. There was always some peritonitis, though it was generally slight and local. The abdomen contained a little serous fluid, sometimes mixed with blood. The mesentery, as well as the spleen and kidneys, often showed ecchymotic patches. The spleen was always enlarged. Some of the renal tubules were filled with bile-pigment and blood, but were otherwise generally more or less normal. The pleura and pericardium contained a little fluid. The animals that lived longest showed decided emaciation. After the operation, the temperature rose 1—1.5 degrees, and remained high, sinking one or two days before death took place. The pulse remained parallel to the temperature. The respiration showed no particular change. The animals were dull and sleepy. Most of the dogs had conjunctivitis, with icterus of the conjunctiva and oral mucous membrane. Bile-pigment appeared in the urine usually a day before it could be discovered in the mucous membrane. Some animals had spasmodic twitchings of the muscles of the head and neck shortly before death. The changes in the nervous system will be the subject of a future paper.

4. *Sotnitschewsky on the Condition of the Arterioles in Granular Atrophy of the Kidney.*—Dr. Sotnitschewsky (Virchow's *Archiv*, Band lxxxii, Heft 2) has examined the small vessels in seventeen cases, in order to decide the questions raised by Gull and Sutton. Of these, thirteen were typical cases of granular kidney; three were more like senile degeneration; and one was a case of glomerulitis. In the first group, the heart was hypertrophied in each case, and in all but one the vessels were thickened. In the second group, the vessels were thickened in all, but the heart was hypertrophied in

only one. In the third, there was neither cardiac hypertrophy nor vascular thickening. The exceptional case in the first group showed glomerulitis. The thickening of the vessels affected the intima and adventitia, the muscular coat being atrophied and fatty.

5. *Tappeiner on Tubercular Infection in the Dog.*—Dr. Tappeiner (Virchow's *Archiv*, Band lxxxii, Heft 2) has undertaken some further experiments on dogs, to confirm his previous observations on the infective properties of phthisical sputa, when inhaled, and to ascertain whether scrofulous pus, or ordinary bronchitic sputum, had the same effect. Four dogs were placed under similar conditions, but two were made to inhale diluted phthisical, and two diluted scrofulous, pus. They were all killed, and their organs examined. Those of the latter two were quite normal, while the lungs and spleen of the former two were studded with miliary tubercles, which were examined and described by Dr. Friedländer. Further experiments proved that the duration of the incubation of tubercle in dogs is between nineteen and twenty-three days. Bronchitic sputa were innocuous.

6. *Ackermann on Hypertrophic and Atrophic Cirrhosis of the Liver.*—Professor Ackermann deals with the anatomical characteristics maintained by Charcot to distinguish the hypertrophic and atrophic forms of cirrhosis. Charcot says the former (hypertrophic cirrhosis) is of biliary origin, arising around the bile-ducts; that the distribution of the new formation is around single lobules (monolobular), and tending to penetrate them (intralobular), and finally characterised by an abundant network of capillary gall-ducts, derived from the hepatic parenchyma by retrograde metamorphosis. Atrophic cirrhosis, on the other hand, is of venous origin (originating around the radicles of the portal vein), is multilobular and interlobular. Dr. Ackermann maintains that the new formation in hypertrophic cirrhosis arises from around the capillaries of the portal and hepatic veins, but that it is characterised by absence of any tendency to retract, a character found in the connective tissue growth of elephantiasis, etc. It is not always monolobular, while the capillary bile-ducts do not form a network, and are derived, not from the liver-cells, but from the pre-existing bile-ducts. The connective tissue in atrophic cirrhosis arises from around the branches of the hepatic artery, and tends to contract. It is not always multilobular, while in many cases it is not interlobular, but penetrates the acini.

7. *Comby on Aphasia without Broca's Lesion.*—M. Comby (*Le Progrès Méd.*, No. 49, 1880) reports the case of a man who had right hemiplegia and aphasia, in which *post mortem* examination showed softening of the white substance of the left ascending frontal convolution. Broca's convolution and the island of Reil, and all other parts of the brain, presented no lesion to the naked eye.

8. *Ripley on Primary Cancer of the Lung.*—At a meeting of the New York Pathological Society, Dr. Ripley (*New York Med. Record*, Dec. 18th, 1880) presented a specimen of primary infiltrating medullary carcinoma of the lung, taken from a man aged fifty-eight, who had presented the physical signs of pleurisy, with effusion; but, on tapping, the fluid was bloody serum. At the necropsy, the left lung was adherent at the upper part; the pleural cavity contained a quart of bloody turbid fluid; the pulmonary tissue was more or less solidified, like croupous pneumonia, with inefficient purulent resolution. Portions of the lung were atelectatic; there were numerous slate-coloured or black streaks running through it. There was a beautifully marked white reticulum, with polygonal meshes, just beneath the pleura. The right lung was also infiltrated, but much less intensely. The bronchial glands were enlarged, hard, and uniformly black. There were some secondary deposits in the kidneys. On microscopical examination of the juice, yielded on pressure, it was found to consist of large polymorphous epithelial cells; the pulmonary alveoli were distended with the cancerous infiltration. The subpleural white reticulum was found to correspond to a network of lymphatics; and the black streaks were the pigmented interalveolar septa. Robert Saundby, M.D.

9. *Budd on the Pathology of Gout.*—Mr. George Budd, in the *Brit. Med. Jour.*, Dec. 1880, p. 972, brings forward the following theory as to the reason of an attack of gout, the process being eliminatory, ordained mainly for the elimination of uric acid. The fibrous tissues are truly centres of elimination, for in them lie the entrances to the eliminative lymphatic system. It has been found that, if the ureters of fowls be tied some hours before death, the connective-tissue-corpuscles, and the lymph-vessels springing from them, are filled with a finely granular mass of urates. Mr. Budd thinks, 'It is proved to demonstration that, following the law of compensation to which all organs of the body conform, the eliminative lymphatic system takes an excited action when the kidneys fail in the excretion of urates; and that urates accumulate in connective-tissue corpuscles, which are the portals to the lymphatic system. I will add an observation to show how closely and concisely my theory is in accordance with the method which the disease adopts. The malady first affects the furthermost articulations, and proceeds progressively towards the trunk. It chooses preferentially joints which have been previously injured. I have assumed that, when the kidneys fail in their due excretion of urates, the fibrous tissues throughout the body take an excited and compensatory action.' Richard Neale, M.D.

10. *Bramwell on the Histology of Locomotor Ataxy.*—Dr. Byrom Bramwell (*Edinb. Med. Jour.*, Jan. 1881) reports a well-marked case, with drawings of sections of the spinal cord. In the lower dorsal and upper lumbar regions the whole of the posterior columns were degenerated. In the cervical region the columns of Goll were alone diseased. Throughout the whole of the lumbar and dorsal regions the nerve-cells, both in the anterior and posterior cornua of grey matter, were markedly fatty. This is a point of some interest in connection with the fact that the muscles of the lower extremities were much wasted. A transverse section in the lower lumbar region, slightly stained with perosmic acid, and mounted in Farrant's solution, shows that the lesion involved the greater part of the posterior columns. Those portions of the posterior columns which are adjacent to the posterior commissure are unaffected, *i.e.*, are deeply stained. A section through the dorsal region showed that the lesion was more extensive than in the lower lumbar region. In the cervical region the lesion was confined (or almost so) to the columns of Goll, the root-zone columns being unaffected, *i.e.*, deeply stained. A longitudinal section through the posterior columns, highly magnified (250 diameters), stained with perosmic acid, cleared up with oil of cloves, and mounted in dammar, shows the minute struc-

ture of the lesion. The nerve-tubes have almost entirely disappeared, their place being taken by delicate fibrous tissue. It is still a moot point whether the lesion in locomotor ataxy consists of an actual increase of the fibrous tissue, with subsequent atrophy of the nerve-tubes from pressure, or whether the lesion does not commence in the nervous elements as an atrophy of the nerve-tubes, with shrinking of the parts, and only an apparent increase of the fibrous tissue.

11. *Betz on the Nature of the Green Vomit.*—The chemical and microscopical nature of green vomit has been made the subject of recent investigations by Dr. F. Betz (*Mémorabilien*, Oct. 6, 1880). It was supposed that the green vomit (*vomitus æruginosus*) was the result of a greenish discoloration of brown biliary pigment, caused by the acid action of the gastric juice. The supposition received corroboration from the bitter taste of the vomited matter, associated with its acid reaction. Dr. Betz concludes, however, that the green colour is not invariably due to the presence of bile. The colour often varies from a yellowish-green or greyish-green, to a grass-green or dark-green, in accordance with the greater or less amount of the 'green substance' and other admixtures. If green vomit be allowed to stand in a vessel, the greater part of the greenish substance will sink, whereas a small portion, containing slime and fatty matters, will float on top. Shaking with water shows that the green substance is heavier than water and insoluble in it, a proof that bile is not the cause of the colour. Agitation with chloroform or ether likewise demonstrates this, for neither fluid takes up the green substance. It may, however, be isolated by shaking with ether in a test-tube. This manipulation results in the appearance of three strata, an upper one consisting of ether, a middle one composed of the green substance, and a lower one containing the gastric mucus. Strong sulphuric acid produces a red colour, strong nitric acid leads to a yellowish discoloration of the green substance. Acetic acid develops and fixes the green colour very completely. Tincture of iodine produces a yellowish-brown, and not a blue tint. Alcohol dissolves the green substance. In some respects, it resembles the chlorophyll of plants. The alcohol dissolves it, and even retains the green colour when boiled. The green vomit may be kept for months and during the hot season, without spontaneous putrid fermentation taking place—a fact which militates against the possibility of its biliary or even animal nature. Dr. Betz also states that sometimes the green vomit has a neutral or alkaline reaction. Microscopical examination shows the green substance to consist of an amorphous, finely granular greenish mass. Discoid heaps, or rounded colonies, are commonly observed. But the green substance may also form a lining over epithelial cells, salivary corpuscles, etc. From these facts Dr. Betz infers the vegetable nature of this substance, and he adds that it is probably derived from punctiform algæ, which he calls *chlorococcus*. He denies any relation of this low fungus to other microphytes, such as the torula cerevisiæ, sarcina ventriculi, or oïdium. Finally, the author remarks that, apart from all other considerations, the frequent occurrence of copious green vomits would go to show that bile could not find its way into the stomach in such enormous quantity. The bitter taste of the green vomit receives its explanation in part from the frequent admixture of some bile, but is also in part due to the presence of a bitter principle in the chlorococcus.

12. *Willard on Early Stages in Hip-Joint Disease.*—Dr. De F. Willard contributes an article to the *Boston Med. and Surg. Jour.*, Nov. 4, 1880, with microscopic examination by Dr. E. O. Shakespeare, in a case of hip-joint disease, in which death resulted at an early stage from tubercular meningitis. The patient, male, aged 5 years, whose mother died of phthisis, was presented at the orthopædic clinic of the University of Pennsylvania. One year ago, apart from special known injury, he experienced a slight lameness, without pain, but at night complained of a sense of weariness about the hip, and a restlessness of the limb was noticed after retiring. These symptoms were the earliest indications of inflammation of this joint, antedating rigidity of the muscles, pain, or lameness. The lameness increased, and the discomfort gave rise subsequently to pain. A diagnosis of hip-joint disease was made after a thorough examination, and treatment ordered accordingly. The patient gained steadily in every particular, growing fat and hearty under iron and cod-liver oil. Six weeks later there was no pain or discomfort of any kind; no induration could be felt about the joint; and flexion, extension, abduction, and adduction, could be performed to a considerable extent without discomfort. In January, however, he commenced to complain of headache; vomiting suddenly set in, and continued persistently for three days. The pain in the head became of the most intense and excruciating character, causing piercing shrieks from the child at each onset; obstinate constipation was present; the characteristic facies, stupor, slow pulse, convulsions, and coma of tubercular meningitis, followed in rapid succession, with death upon the sixth day after the vomiting commenced, and two months after the child was first examined. The *post mortem* examination was not thorough, but possession of the head of the femur and entire acetabulum was obtained, and the following conclusions were arrived at after a microscopical examination by Dr. Shakespeare. The morbid process affected the synovial membranes. The history of the case, both clinical and pathological, would seem to support the views of those who defend the doctrine that in a certain depraved animal organism inflammatory products tend to caseous degenerations, which may ultimately cause a local or general infection of the various tissues of the animal, and a limited or extensive irruption of tubercles; while there was a slight fatty degeneration of the cartilage-cells at the surface of the cartilage, there was no such decided alteration of the kind which Cornil and Ranvier, and some other authors, believe to be the initial and essential lesion in so-called scrofulous hip-joint disease. The microscopical examination showed, further, that the disease had at no point advanced to the stage of ulceration, and also that fatty degeneration had barely commenced; still, infection of the system had resulted, thus showing that while the inflammation could not be distinguished from the simple form, yet that there lurked behind this process a systemic condition, hereditary or acquired, predisposing to inflammation of a low grade—'languid'. It is not uncommon to find cases both of disease of hip and of spine dying of tubercular meningitis, but such a result would not occur at an early stage of the disease were the previous condition of the child untainted.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. CATERNAULT.—Successful Case of Cæsarean Section. (*Concours Méd.*, 1880.)
2. DUMAS.—On Albuminuria in Pregnancy. (*Thèse de Paris*, 1880.)
3. FELSENREICH.—A Case of Rupture of the Uterus. (*Wiener Med. Woch.*, No. 3, 1881.)
4. FROISIER.—Phlegmasia Alba Dolens. (*Thèse de Paris*, 1880.)
5. GREUSER.—Scarlatina in Puerperal Women complicated with Acute Rheumatic Polyarthritis. (*Arch. für Gyn.*, Band xvi, Heft 3.)
6. HEGAR.—On Sham Castration. (*Berl. Klin. Woch.*, No. 48, 1880.)
7. HOWARD.—On Three Fatal Cases of Rupture of the Uterus. (*Amer. Jour. of Obstet.*, Jan. 1881.)
8. LABAT.—Version by External Manœuvres during Labour. (*Ann. de Gyn.*, Jan. 1881.)
9. LANDAU.—On the Means of Dilating the Cervix Uteri. (*Central. für Gyn.*, Jan. 8, 1881.)
10. LUSK.—The Justo Minor Pelvis.
11. TAIT, LAWSON.—On the Treatment of Pelvic Suppuration by Abdominal Section and Drainage. (*Trans. of the Royal Medical and Chir. Soc.*, vol. lxiii.)

1. *Caternault on a Successful Case of Cæsarean Section.*—The patient, aged 28, had been previously delivered by forceps of a dead child. Dr. Catermault, being called to her in labour with her second child, found the pelvis very contracted, especially in the bi-iliac diameter. She had been in hard labour for three hours, and Dr. Caternault advised Drs. Assier and Chailloux to deliver by Cæsarean section. This they proceeded to do. The patient was not anæsthetised, to avoid vomiting, and because she was exhausted. The incision through the abdominal wall allowed the escape of a little peritoneal fluid. The incision through the anterior wall of the uterus was three and a half inches in length. The waters had escaped; the right arm presented through the incision. This was held by an assistant whilst Dr. Caternault passed his hand under the head and brought the occiput through the opening and delivered. The child was a living male, somewhat asphyxiated. Only a little blood was lost. Two grammes of ergot were now given to the mother. The placenta escaped through the incision. The abdominal cavity was carefully sponged out. One suture was inserted into the middle of the uterine wound. Four deep and fine superficial sutures were used to close the abdominal wound. An opening was left at the lower end of the abdominal wound, through which a caoutchouc drainage-tube was passed to the fundus uteri. Listerian precautions were used, including carbolic spray. On the evening of the operation the patient was quiet; a little bloody fluid escaped by the drainage-tube. Six days later, as no discharge escaped by the vagina, but all through the drainage-tube, Dr. Caternault introduced a finger into the cervix, and let out some rusty, thick, fœtid, gaseous discharge similar to that escaping by the tube. A drainage-tube was then placed in the cervix, and frequent washings out with carbolic solution were effected through it. On the 102nd day after the operation, the patient had completely recovered. Mother and child are now quite well. Dr. Caternault is of opinion that the dangers of Cæsarean section are exaggerated, and that it is too rarely resorted to.

2. *Felsenreich on a Case of Rupture of the Uterus.*—Dr. Felsenreich relates the case of a woman, aged 27, who had had four children born naturally. When he was called to her the waters had burst, the left arm presented, and the head was in the left iliac fossa. The uterus was very tender all over. After decapitation and extraction of the child, examination revealed a rent through the uterus, four fingers in breadth, at the left cervical wall, behind the round ligament, at the spot where the child's head had lain. The placenta had escaped into the peritoneum. The hand was introduced into the abdominal cavity in search of it; in doing so, the border of the liver was felt. The placenta was extracted through the rent in the uterus. A thick drainage-tube was passed into the uterus, and left in the uterine wound. The uterus was washed out gently with a two per cent. carbolic solution, which did not, according to the feelings of the patient, escape into the peritoneum. On the tenth day, the drainage-tube was removed. The patient had recovered at the end of a month. Dr. Felsenreich remarks that the case is interesting as showing the power the peritoneum possesses of absorbing liquor amnii, meconium, and other fluids.

6. *Hegar on Israel's Sham-Castration.*—Hegar gives the case of a patient who had suffered from dysmenorrhœa, vomiting, etc., and upon whom Israel had performed the operation of pretending to remove the ovaries. The patient was not relieved by this proceeding, and consulted Hegar some time afterwards. He found her in a markedly prostrated condition. There was considerable perimetritis or general pelvic peritonitis.

7. *Howard on Three Fatal Cases of Rupture of the Uterus.*—Dr. Howard says that this accident was formerly regarded as uniformly fatal, but of late, since non-interference and violent and fruitless efforts to deliver through the contracted rent in the uterus have given place to laparotomy, highly encouraging results have been obtained. A great impetus was given to this operation by Dr. James Trask, who proved, nearly a quarter of a century ago, that the success arising from it is greater than that from any other known method of delivery, only seven deaths having occurred out of twenty published cases. In respect to laparotomy, however, this statement doubtless exhibits an undue proportion of recoveries under any one method of management. Case 1.—Mrs. J. S., aged 39, the mother of seven children, was seen in consultation with Drs. Inloes and F. Donaldson of Baltimore. Her previous labours had been uncomplicated. She was in good health at the beginning of the present labour. Suddenly, during a violent uterine contraction, something gave way; the pains ceased; there was a discharge of blood from the vagina; the head of the child could no longer be felt; and the fœtus could be distinctly recognised in the abdominal cavity. Laparotomy was performed eight hours after the occurrence of the accident. The rupture extended from the os internum nearly to the fundus on the right side; the uterus was well contracted; there was no hæmorrhage; the torn surface was irregular and ragged. The patient died of septic peritonitis. Case 2.—Mrs. M., aged 30, in labour with her fourth child, was seen in consultation with Drs. Redei and Caleb Winslow of Baltimore, in 1874. While Dr. Redei was attempting to deliver with the forceps, a severe pain occurred attended by a sensation as if something had given way, and was at once followed by all the symptoms of shock. The head receded, and the fœtus could no longer be felt in the uterus. Laparotomy was performed. The rupture of the uterus

was upon the right side, and extended from the os internum to the fundus; at the juncture of the body with the cervix, it was exceedingly irregular, involving the cervix transversely about three-fourths of an inch. The woman died on the seventh day of septic peritonitis. Case 3.—Mrs. D., in labour with her ninth child, was seen in consultation with Dr. Wolfe of Baltimore, in January 1879, when many hours had elapsed since the occurrence of the accident. Laparotomy was performed with only the faintest prospect of success, and largely to gratify an affectionate mother pleading for relief. The rent in the uterus was on the left side, and seemed not to be more than two inches in length; its edges appeared cleanly cut. The uterus was firmly contracted, and there was no blood in the uterine cavity. The patient died on the day following the operation. Dr. Howard thinks the primary cause is malnutrition, perhaps fatty degeneration, of uterine muscular fibre. When the fœtus has passed completely into the abdominal cavity there are only three alternatives from which to choose: 1. To abandon the case to the efforts of nature, the chances of recovery being almost nothing; 2. To introduce the hand into the abdominal cavity through the rent in the uterus, seize and deliver; or, 3. Laparotomy, which by almost universal consent has taken the place of the second plan of procedure, because removal of the blood and other fluids is only second in importance to that of removing the fœtus itself from the abdominal cavity.

8. *Labat on Version during Labour by External Manœuvres.*—M. Labat relates two cases in which he performed version during labour by external manipulations. He says that whenever a presentation less favourable than the vertex is made out during labour, version by external manœuvres should be attempted if the fœtus be mobile. It must be remembered, however, that moderation must be observed in the manipulations. Rupture of the uterus might result from forcible efforts to turn the child. During labour, the uterus is less tolerant of interference, and its walls do not support pressure so well as during pregnancy. In the two cases recorded by Dr. Labat, no precaution, such as the application of Dr. Pinard's eutocic belt, was adopted to secure the vertex presentation obtained. This was because the contractions of the uterus at once fixed the head in the brim. Dr. Labat concludes: 1. Version by external manipulation is possible in certain cases during labour; 2. When the situation of the fœtus is transverse, and the placenta is inverted near the os uteri, cephalic version by external manipulation renders the hæmorrhage less severe; 3. When cephalic version is impossible, pelvic version should be resorted to; 4. During labour, the application of the eutocic belt is not always necessary. [The eutocic belt is designed by Dr. Pinard, in the form of a modified binder, to apply round the abdomen to retain the head on the brim of the pelvis after external version has been performed. Dr. Pinard thus secures a head-presentation weeks before the labour sets in.—*Rep.*]

9. *Landau on the Means of Dilating the Cervix Uteri.*—Dr. Landau rejects the various metrotomes, as cutting too deeply and as causing hæmorrhage. The dilators of Sims, Ellinger, and others, in his opinion, require that the patient should be under chloroform narcosis. Sponge-tents he objects to as likely to originate blood-poisoning. He advises the use of the tupelo tent made from the Nyssa aquatica, a plant growing in the South American swamp. This, he states, does not lead to septicæmia. [The author overlooks the true course of septicæmia from tents, which arises not so much from the nature of the tent as from the abrasion of the cervix which it causes, and which thus offers an absorbing raw surface for foul matters.—*Rep.*]

11. *Tait on Pelvic Suppuration.*—Mr. Lawson Tait relates six cases of pelvic abscess from the disintegration of pelvic hæmatocele, which he treated by abdominal section. All six cases recovered. In those cases where the cyst cavity admitted it, the edges of the opening into the cyst were carefully united to the abdominal wound. A drainage-tube, usually Kœberle's glass-tube, was placed in the abdominal opening, and replaced later by a soft rubber, or a Chassaignac's wire-tube. The cavity of the cyst was always carefully cleansed out before the abdominal wound was closed. Mr. Tait is satisfied that, in all these cases, vaginal tapping would have been useless. In most of the cases, if the abscess had been opened by natural processes, it would have been into the rectum. In the last case, it would have probably been into one of the groins; but he thinks that, in almost every one of the cases, death would have occurred long before a natural outlet could have been established. His general conclusion is, that the opening of such abscess by abdominal section is neither a difficult nor a dangerous operation; that recovery is made in this way more certain and rapid than in any other; and that, in future, he would always advise an exploratory incision where there is good reason to believe there is an abscess which cannot be reached or emptied satisfactorily from below.

Fancourt Barnes, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

1. Boulton.—On the Physical Development of Children. (*Lancet*, Oct. 16.)
2. Smith, Eustace.—On Catarrh of the Stomach in Children. (*Ibid.*, Nov. 20 and 27.)
3. Sharkey.—Diagnosis of Congenital Heart-Disease. (*Ibid.*, Nov. 27 and Dec. 4.)
4. Buzzard.—On Acute Atrophic Paralysis. (*Ibid.*, Dec. 11 and 25.)
5. Garlick.—On Peritoneal Tuberculosis of Children. (*Ibid.*, Dec. 25.)
6. Cruse.—On Icterus Neonatorum. (*Arch. für Kinder.*, vol. i, pt. 10.)
7. Hajek.—On Post-Scarlatinal Nephritis and Uræmia. (*Ibid.*)
8. Prætorius.—On the Treatment of Uræmia by Pilocarpin. (*Jahr. für Kinder.*, vol. xv, pt. 3.)

CASES OF CHILDREN'S DISEASES IN HOSPITALS.

Tremors resembling Paralysis-Agitans: Boy aged 8 years. Mr. Pitts. (*Brit. Med. Jour.*, Oct. 2, 1880.)

Case of Imperforate Rectum, with a suggestion for a new method of treatment: Dr. Neil Macleod. (*Ibid.*, Oct. 23.)

Bilateral Eyeball Tension in child, aged 1 year, treated by paracentesis, Sclerotomy, and Iridectomy: successful: Mr. Spencer Watson. (*Ibid.*)

Infantile Paralysis: Analysis of eighteen cases, showing greater likelihood of recovery when upper extremity rather than lower is affected: Dr. Warner: East London Hosp. for Children. (*Ibid.*, Oct. 30.)

Œdema of Legs: Cases independent of cardiac or renal disease: apparently due to anæmia. (*Ibid.*)

Small-Headed Children. (*Ibid.*)

Case of Infantile Paraplegia, aged 3 years, apparently due to concussion. Dr. Lusk. (*Ibid.*, Nov. 6.)

Toleration of Opium to extent of 6 to 8 drachms in 24 hours, given in drachm doses at the age of 4 months, gradually increased from birth: complete recovery in two months. Dr. Booth. (*Ibid.*, Nov. 13.)

Treatment of Destructive Inflammation of Knee-Joint: Dr. Newman. (*Ibid.*, Nov. 20.)

Case of Talipes Equino-Varus: Boy, aged 6: Extreme in right foot, less marked in left: Complete recovery by removal of a triangular piece of bone from anterior surface of os calcis, antiseptically, and subsequent elastic tension. Mr. Whitehead. (*Ibid.*, Nov. 27.)

Inflammation of Vermiform Appendix from Fæcal Accumulation: Death from general peritonitis: Boy, aged 13 years: duration of symptoms, four days: quite well previously. Mass of hard fæces of size of hen's egg in cœcum, and similar fragment of size of cherry-stone in appendix: no ulceration of the latter, which was intensely inflamed: Dr. Rickards. (*Ibid.*, Dec. 11.)

Case of Congenital Cardiac Malformation: pulmonary stenosis: aorta arising from both ventricles: 6 years. Dr. Peacock. (*Lancet*, Oct. 2.)

Strangulated Congenital Inguinal Hernia: operation, antiseptic: recovery: aged 14 months. Dr. W. M. Ball. (*Ibid.*, Oct. 9)

Gunshot Wound of Median Nerve: Boy, aged 10 years: paralysis and hyperæsthesia of fore-arm: removal of pellet from interior of nerve: recovery. Dr. Laurie of Lahore. (*Ibid.*)

Two Cases of Fracture of Basis Cranii in children aged 6 years. Mr. Walmsley: Salford Royal Hospital. (*Ibid*)

Case of Cerebro-Spinal Meningitis: aged 8 years: Fatal: Duration of symptoms, one month: destruction of eyeball, and cutaneous gangrene: No tubercle. Mr. T. Robinson. (*Ibid.*, Oct. 16.)

Case of Syphilitic Enlarged Spleen: aged 5 years: viscus reached to crest of ilium: reduced to normal size, under treatment by mercury and iodide of potassium. Mr. Tyson. (*Ibid.*, Oct. 23.)

Cases of Diphtheria: St. George's Hospital. Dr. Whipham. (*Ibid.*)

Paraffin-poisoning: aged 2 years: symptoms similar to belladonna-poisoning: Recovery. Mr. Elliott, Westminster Hospital. (*Ibid.*, Nov. 6.)

Rupture and Removal of Eyeball in a Boy aged 14 years, the subject of Hemiplegia: profuse hæmorrhage uncontrolled by ergotin, actual cautery, etc.: Ultimate recovery. Dr. Emrys-Jones, Royal Eye Hospital, Manchester. (*Ibid.*, Nov. 27.)

Tracheotomy in a Child aged 6 months: Recovery. Mr. Croft, St. Thomas's Hospital. (*Ibid.*)

An Unusual Case of Congenital Syphilis: subcutaneous extravasation: collapse: death, at 20 days. Dr. Puckett. (*Ibid.*, Dec. 18.)

CASES AND SPECIMENS OF CHILDREN'S DISEASES EXHIBITED AT SOCIETIES.

CLINICAL SOCIETY OF LONDON.—Oct. 8, Case of Traumatic Epilepsy, treated by Trephining: aged 14 years. Dr. Lees and Mr. Bellamy.—Oct. 22, Intestinal Obstruction, caused by a Hernia through the mesentery of a Meckel's diverticulum, which had retained its attachment to the umbilicus: aged 7 years. Dr. Greenhow.—Nov. 12, Erythema Gyratum in brother and sister, persistent from age of 3 or 4 years to 20 years. Dr. T. C. Fox.—Nov. 26, Hydro-Encephalocele: Boy, aged 7 years; sessile, soft, fluctuating, non-pulsatile, non-translucent tumour at vertex and back of cranium, 14½ inches in circumference at base, 7½ inches in one vertex from side to side, apparently originating from deficiency of parietal bones, first noticed at age of 2 years: Epileptiform fits and athetosis of increasing severity. Dr. Carrington.—Right Hemiplegia after Scarlet Fever: Embolism of Middle Cerebral Artery: Disturbance of Broca's Convolution without Aphasia: Death from Diphtheria: aged 5 years. Dr. F. Taylor.

PATHOLOGICAL SOCIETY OF LONDON.—Oct. 19, Paralysis of 3rd and 6th Cranial Nerves in Congenital Syphilis on Right Side only, and partial Anæsthesia of Skin supplied by the 5th on same side: girl, aged 14. Mr. Nettleship.—Nov. 2, Multiple Exostosis in neighbourhood of Shoulder-joint, Knee, and Ankle: exact symmetry in position: right larger than left: similar affection in five generations of family: boy. Mr. Jonathan Hutchinson.—Papilloma of Umbilicus, size of currant, removed from child at 5 months. Mr. Gould.—Telostititis in Syphilitic Infant, aged 6 weeks: Suppuration of left elbow and both knee-joints: Recovery under mercurial treatment, noteworthy from multiplicity of affections, and early age, at which bone disease had occurred. Dr. Lees.—Nov. 16, Living Specimens of Complete absence of Fibula: boy, aged 3 years: only 14 cases on record: deficient development of foot. Mr. Gould.

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1. *Boulton on the Physical Development of Children.*—Dr. Boulton urges the importance of a reliable standard of height for weight during that period of childhood which lies between three and five feet; for it is during the period of growth that mischief is done, or can be averted. From observations, not on single individuals, but from repeated ones on the same, extending over ten years, Dr. Boulton concludes that different healthy children grow at different rates, and that in average English children, brought up under favourable circumstances, the rate is two to three inches per year—a growth of more or less than this should excite apprehension. The healthy child, that grows regularly two inches per year, becomes a short-statured adult, whilst the rate of three inches per year indicates a tall adult. Puberty arrests the growth normally, but intercurrent disease will interfere with the regular progress. Whatever the rate of growth, the writer affirms that weight for height should be in each case identically the same; and all healthy children should grow broad in proportion to their height. Between three and four feet, the increase in weight should be 2 lb. per inch; and between 4 and 5 ft., 2½ lbs. per inch. And further, the average weight at 3 ft. is 2 st. 8lbs.; at 4 ft., 4 st. 4 lbs.; and at 5 ft., 6 st. 6 lbs. These weights may be exceeded slightly within healthy limits, but the author gives 7 lbs. below these averages as the margin of safety; below that limit the children are ill developed, and readily succumb to constitutional diseases. The value of such standards in preventive medicine is obvious.

2. *Smith on Catarrh of the Stomach in Children.*—After referring to the well-known susceptibility to catarrhal disorders in early life, and the special liability of the mucous membrane to be affected by cold, more particularly of the gastro-intestinal tract, Dr. Eustace Smith proceeds to illustrate, by a case, the occasional difficulty that is met with in distinguishing between acute gastritis, enteric fever, and acute tuberculosis. Even in children, it is exceptional for the acute gastritis to be accompanied by pyrexia, and it is in these exceptional cases that the difficulty arises. Cases of recurring gastric catarrh, of varying severity, are not uncommon; and if the intervals between the attacks be short, the children very seriously suffer from the disturbance of their nutrition. Catarrh of the stomach, unaccompanied by fever, is perhaps the commonest derangement to which children are liable. The general appearance of such cases is well known; but the writer draws attention to certain symptoms, such as the unfrequency of sickness, since the gastric catarrh is not always accompanied by irritability;

rarely quantities of some fluid and mucus are vomited. Frontal headaches are invariable, and usually intense. The urine is loaded with lithates at intervals, and occasionally a precipitate of uric acid is to be seen, and even a trace of albumen. Attacks of syncope, more or less complete, are not uncommon, even in mild cases, when the general nutrition has not suffered, and are usually accompanied by palpitations and flatulent pains about the chest. Among the most important points in the treatment of this disease, in whatever form it occurs, are removal of all such causes as improper food; and an emetic of wine of ipecacuanha is often valuable in clearing out of the stomach the fermenting masses, and subsequently a mixture containing tincture of nux vomica and bicarbonate of soda. A mild aperient may be needed. The diet must be light and nutritious, especially avoiding such substances as tend to ferment in the stomach, such as starches and sugars and milk, unless with lime-water. The weakness induced by successive attacks is to be treated with iron, but Dr. Smith objects to it being given in the form of Parrish's food, the syrupy constituents of which he considers to supply material for fermentation, and so increase and maintain the original mischief. Dr. Smith even goes further, and disapproves generally of syrups being given to make medicine palatable for young children, and prefers glycerine or a few drops of spirits of chloroform. The iron should be given in the dialysed form or the ammonio-citrate, to which liquor strychniæ may be subsequently added. The writer forcibly insists upon the absolute necessity of taking precautions against chills, since the catarrhal state, whichever organ be affected, tends readily to recurrence, and induces a state very susceptible to change of temperature. For this purpose a broad flannel abdominal belt, reaching from the axillæ to the hips, should be worn daily. Cold bathing is a powerful aid to increase the resisting power of the child. The writer gives the details of an excellent plan for effecting this often difficult operation. The child should be given a little milk or bread and butter, and then well rubbed, especially over the back, and sat in a few inches of hot water, and a douche of cold salt water applied over the shoulders. After drying, the child may be rubbed with flesh-gloves, and may be even returned for a short time to bed before dressing. Such treatment has a most invigorating effect, and is applicable to the most delicate children.

3. *Sharkey on the Diagnosis of Congenital Heart-Disease.*—Dr. Sharkey draws attention to the well known difficulty in making a diagnosis in congenital heart-disease, which he attributes to the existence of the abnormal patency of the auricular or ventricular septa or of the ductus anteriosus. Such lesions may be purely compensatory to other imperfections, but their existence gives rise to sounds which tend to the utter confusion of the observer, and, whilst an acquired state of heart-disease may be usually ascertained with certainty, by attention to the site, time of occurrence, and course in which murmurs are conducted, together with the condition of the curvature as regards hypertrophy and dilatation, such data are comparatively useless in congenital morbus cordis, when the abnormal openings prevent our having to deal with 'an almost constant anatomical structure', such as the heart of the adult is. In short, no positive physical signs of these lesions are known, owing to the different combinations in which they occur; one and the same physical condition being brought about by very different imperfections. Nor is the making of a prognosis more satisfactory, since we can do little more than guess at the compensating alteration that may exist.

4. *Buzzard on Acute Atrophic Paralysis.*—In the course of a lecture on cases of acute anterior polio myelitis ('the essential paralysis of children', or 'infantile paralysis') in both children and adults, given by Dr. Buzzard in the National Hospital for the Paralysed and Epileptic, the following excellent summary of this condition was given. As it occurs in infancy, and it is peculiarly apt to attack children under two years of age, after a varying amount of febrile movements, one or more or all of the limbs are observed to be paralysed. The muscles of the trunk are also sometimes involved, and very exceptionally some of those supplied by the medulla. There may have been convulsion, coma, some transient loss of cutaneous sensibility, and a temporary trouble with the bladder or rectum; but to a great extent, though not exclusively, the brunt of the disease falls suddenly, or at least very rapidly, upon the motor power of a limb or limbs. After the first day or so, any change which takes place in the power of movement is a change for the better. The limbs do not become more paralysed. On the contrary, after a few weeks, or sometimes days, there is a gradual clearing off of the difficulty as regards some of the limbs, one or more, perhaps, remaining unimproved. There is a remarkable feature in this form of paralysis. Many of the muscles paralysed lose their faradaic excitability entirely within a week, and rapidly waste. But although they fail to respond to the strongest induced currents, they react to slow interruptions of the constant current (reaction of degeneration). The nerves to the muscles, on the other hand, lose their excitability to both forms of electrical excitation. Some, again, of the muscles whose faradaic excitability has been lowered, but not lost, are not long in regaining the power of contraction to voluntary impulses. (Duchenne felt able from his experience to say that any muscles retaining some amount of faradaic excitability after the eighth day would recover.) The paralysed muscles are flaccid. This constitutes what is called the first period. The second begins a few weeks, or may be delayed for several months, after the attack. It is called the period of regression, for in it is a gradual return of power in more or less of the muscles, and their excitability to faradism again appears. The amount of recovery differs extraordinarily in cases, so that it is impossible to say more than this; that, when several limbs are attacked at first, it is much more common than not for some of them to recover, but rare for all to do so. The muscles may be so wasted as to leave the limb in a skeleton-like state, or fatty substitution may mask the real loss of muscular substance, and give a false air of plumpness to the limb. The development of the osseous system is more or less arrested, so that a bone may, in course of years, be some inches shorter and considerably thinner than its fellow. There is a diminution in the calibre of blood-vessels, leading to comparative coldness and blueness of the limbs, which also often show unusual liability to chilblains; and most important of all, perhaps, the tonicity of such muscles as remain sound or comparatively little injured, causing them gradually to overpower those whose function is destroyed, gives rise to deformities, which often tend to persist and increase in spite of all efforts to reduce them.' A series of cases

illustrative of the foregoing descriptions are recorded.

5. *Garlick on Peritoneal Tuberculosis of Children.*—The cases in which the lesion consists in a growth of tubercle in the peritoneum are very numerous and various in the appearances they present. Based on their clinical characters, Dr. Garlick offers the following classification. 1. Latent cases, either a part of a general tuberculosis, or secondary to tubercular ulcers. These are probably the most frequent, and, as the writer points out, 'their latency results either from the absence of inflammatory change or from the obscuring of its symptoms by the more grave affections of other organs'. The difficulty of diagnosing tubercular ulceration is insisted on. 2. Cases characterised by an ascites, which may mask all other conditions. It is well known that the extent to which atrophy exists in these cases is very variable, being sometimes extreme, but even then may be completely absorbed. Sometimes the fluid is thrown out in pus, and a long-continued discharge may take place from the navel. 3. Cases presenting distinct abdominal tumours of various sizes and shapes, but with a characteristic hard transverse ruler-like band, situated about or above the navel, sometimes stretching across the abdomen, and losing its definition at its extremities, or passing into other masses. The writer has measured one eight inches long. Such tumour is caused by a rolled up great omentum. Other tumours are found by thickening and adhesions of the peritoneum and intestinal wall, often involving enlarged glands; but the author points out often great disproportion between the amount of tubercular disease and the enlargement of the mesenteric glands, the latter being often scarcely affected, when there may be extensive ulceration of Peyer's patches, and the cæcum and the peritoneum strewn with tubercle. 4. Cases in which all the abdominal contents and the abdominal wall are mutually and inextricably united, often with attendant intercommunication of different parts, so converting the abdomen into a trabeculated cavity.

6. *Cruse on Icterus Neonatorum.*—Dr. Cruse, of the Foundling Hospital at St. Petersburg, contributes to the tenth part of the first volume of the *Archives of Children's Disease*, a most exhaustive and important paper on the subject of icterus neonatorum. He classifies the various views held as to the nature of this disease into three groups as follows: 1. As an icterus due to congenital or acquired obstruction of the bile-ducts, or to venous congestion of the liver from imperfect development of the lungs. 2. As an icterus due to resorption. The cessation of flow through the umbilical vein causes a diminution of pressure on the hepatic capillaries, and hence the bile, instead of being secreted into the ducts, passes into the blood and lymph-channels. 3. The hæmatogenous theory of the cause of icterus; the discoloration being assumed to be due to decomposition of the blood-pigment, and not to direct absorption of the biliary colouring matter. On the hepatogenous theory of the causation of jaundice (the bile-pigments being absorbed as such into the blood), these yellow discolorations of the skin, which frequently follow the cutaneous congestion of the newborn, and from which the conjunctiva is free, are excluded from the definition of icterus neonatorum, while in the hæmatogenous theory of jaundice they would be included. The true icterus neonatorum may be divided into idiopathic or simple, and symptomatic or malignant, from congenital obliteration of the ductus choledochus or phlebitis of the umbilical vein. The author divides his paper into three sections in which he treats respectively of the condition of the urine in this disease, the statistical data concerning the etiology, symptoms, and prognosis; and lastly, the pathognosis. Respecting the urine, the author concludes that, in all cases of icterus of the new-born, where there is staining of the sclerotic conjunctiva, the urine contains granular and dissolved bile-pigment, but that in cases where the conjunctiva is unaffected there are only traces, and not always those, of bile-pigment in the urine; and, further, that the view adopted by Porak and others that this affection is hæmapheic in nature is untenable, since the absence of bile-pigment in the urine is characteristic of the latter disease. According to the hæmatophein theory the blood-pigments are converted into hæmatin from which the biliary colouring matters are derived, and not into hæmaphein, as in the former case. This view, however, Dr. Cruse does not regard as a satisfactory explanation of icterus neonatorum, except so far as regards the cutaneous discolorations from altered blood-extravasations. Others, such as Leyden, assuming that the conversion of blood-pigment into biliary colouring matter takes place in the vessels and not in the tissues, explain the origin of icterus neonatorum on this view.

7. *Hajek on Postscarlatinal Nephritis.* — The greater part of the contribution by Dr. Hajek agrees with the majority of articles to be found in German periodicals, in consisting almost entirely of an enumeration of the names of every one who has had anything to say on the subject in question, coupled with a partial criticism of their views, and concluding by leaving the question still in doubt, or only augmented by some trifling additional information. As articles of reference to what has been said, such papers are invaluable. Whether all that has been said is worth being referred to, is perhaps doubtful. With the uncertainty that exists as to the cause of the complex symptoms included under uræmia, this title is rather to be regarded as provisional; and the further question of the exact connection with nephritis with the acute exanthemata, especially scarlet fever, is still uncertain. Uræmia is a constant accompaniment of diffuse inflammation of the kidneys; and researches on uræmic eclampsia have disclosed affections of the brain and cord, such as œdema, and even hæmorrhage into the meninges and nerve-substance, which, according to Traube, by producing a capillary anæmia leads to convulsion, a theory at variance with what is usually held. Frerichs attributes the symptoms of so called uræmia to carbonate of ammonia, derived from urinary salts, whilst Voit regards the retention of all or some of the products of decomposition within the body as the cause, and compares the result to the extinguishing of a fire by accumulation of ashes. Caffer (1878), by injections of carbonate of ammonia into the blood, found that the corpuscles by the retention of this salt are materially changed in their structure and power of absorption of oxygen, and their number considerably diminished. Jaksch and Treitz suggest the decomposition of materials in the intestine as a supplementary source of ammonia. Mantegazza has seen muscular convulsions from injection of urinary matter as well as from the immersion of portions of muscle in urinary sediment. Perles and others speak of the quantity of kreatin and kreatinin in the blood in Bright's disease. In short, the connection between retention of urine in nephritis, and the appearances of uræmia or am-

monæmia is yet so imperfectly defined, that Thomas, in Gabault's *Handbook of Children's Diseases*, says that uræmia arises upon some disturbance of urinary secretion, and is probably occasioned by it. To the question, what is the pathological connection between nephritis and scarlet fever? the answer is, the long-continued, more or less complete, suppression of the perspiration. The constant results of complete or partial covering of the skin with oil, varnish, etc., are albuminuria, and diminished quantity of urine, fall of temperature, dyspnœa, convulsions, coma, and death. Corresponding *post mortem* to these symptoms are diffuse nephritis, pneumonia, myocarditis, and hepatitis. Some observers consider that death is due to increased radiation of heat from the distended superficial capillaries; others attribute it to uræmia, and the crystals of triple phosphates which are found in the bodies of animals so treated are products of urinary decomposition. Lang clearly explains the uræmia as being caused by disease of the looped renal tubules; since excretion of water by the skin is stopped, and the lungs cannot compensate, the tubules are blocked up, and retention of urine brings about the uræmia. Lassar supposes that the sudden determination to the internal organs of blood very much cooled at the surface of the lung, is itself a cause of inflammation. An identical train of symptoms follow extension of superficial scalds. The identity in symptoms and *post mortem* appearances between primary or scarlatinal nephritis, will thus be brought about by artificial suppression of cutaneous secretion, however produced, justifies the conclusion that in scarlet fever the same causes, viz., the suppression of perspiration, induces the same effects, viz., nephritis and uræmia. Barthez and Rilliet put forward the idea, in which they were supported by Baginsky, that the albuminuria depended upon the non-conversion into epithelium, for which it was destined, of certain albuminous matter in the blood, which was, therefore, excreted by the urine. Bohn opposed this view, and showed how the function of the skin is impeded by the œdema of the cutis, and the dead and stiffened epidermis. From this point of view the scarlatinal nephritis would seem not to be a local expression of the primary disease, and still less due to taking cold (that scape-goat of etiology, as Bartels says) during the desquamation stage, but to be a direct consequence of the fever from the conditions of the skin.

8. *Prætorius on the Treatment of Uræmia by Pilocarpin.*—Dr. Prætorius publishes the details of eleven cases of uræmia treated with muriate of pilocarpin, and arrives at the following results. 1. The drug is of distinct value, and should be injected so soon as the symptoms of headache, irregular pulse, vomiting, and diminished secretion of urine appear. 2. Its administration is only contra-indicated in cases of extreme weakness and threatening collapse, or general anasarca. 3. It has no effect in cases of glomerular nephritis; but, since this condition cannot be diagnosed by the microscope, its administration should not be prevented. 4. Pilocarpin is not only a diaphoretic, but also has a direct influence on the renal secretion. An extensive series of references to the use of the drug is appended, as well as a description and method of administration, etc.

W. H. Allchin, M.B.

PHYSIOLOGY.

ALIMENTARY SYSTEM.

RECENT PAPERS.

1. Edinger, L.—On the Structure of the Glandular Cells of the Human Stomach. (*Arch. für Micr. Anat.*, Band xvii, p. 193.)

2. Langley, J. N.—On the Changes in Various Glands during Secretion. (*Journal of Physiology*, vol. ii, p. 261.)

3. Ewald, C. A.—Experiments on the Energy of various Artificial Digestive Preparations. (*Zeitschr. für Klin. Med.*, Band i, p. 231.)

4. Albertoni, P.—On Peptones. (*Centralbl. für die Med. Wiss.*, Aug. 7, 1880.)

5. Schmidt-Mülheim, A.—On Peptones and their Physiological Significance. (*Arch. für Anat. und Phys., Phys. Abth.*, 1880, p. 33.)

6. Langley and Sewall.—On the Changes in Pepsin-forming Glands during Secretion. (*Journal of Physiol.*, vol. i, p. 281.)

7. Arnozan and François-Franck.—On the Mechanism of Vomiting. (*Progrès Méd.*, August 1879.)

8. Arnozan and François-Franck.—On the Rôle of Thoracic Aspiration in the Mechanism of Vomiting. (*Gaz. Méd. de Paris*, 1879.)

1. *Edinger on the Gastric Follicles.*—Opportunities for examining the follicles of the human stomach lead Edinger to the interesting conclusion, that there exists but one variety of cell in these glands, and that its form becomes changed by its becoming filled up with ferment.

2. *Langley on the Changes in Glands during Secretion.*—The examination of the changes in gland-cells during activity is usually made by hardening glands before and after activity, and comparing the stained sections. This method affords much information, but inferences drawn from knowledge so gained are open to grave suspicion, when not supported by observations made on the living tissue. To obtain glands in the living condition for observation, Langley recommends either that the thin edge of a lobule be cut off with scissors and at once mounted (this is best for thin soft glands), or that a piece of the size of a pea be cut out, and a thin section with a sharp razor or Valentin's knife made (this serves for more consistent glands). In either case it is best to mount without adding any fluid. In the rabbit, the thinner lobes of the parotid may be viewed under the microscope with the blood circulating freely, and may be thus watched in the living condition for many hours. By comparing the living gland with mounted specimens freshly cut, it is found that the latter give unaltered the appearances of the living gland. *The parotid gland of the rabbit.*—The alveoli of the parotid of a hungry rabbit, taken fresh from the animal, and at once examined, are granular throughout; but if the gland be thrown into a state of activity, either by stimulating the sympathetic in the neck, or by injecting pilocarpin, or by feeding, the alveoli alter their appearance, and, instead of being granular throughout, become clear at their outer portion near the basement-membrane, and thus show an inner granular, and an outer clear non-granular, zone. That is, during secretion the granules, normally contained by the cells, are in some way or other used up, probably to form part of the saliva secreted. After prolonged secretion, very few granules are left in the cells; those that do remain in any cell form a thin layer at its inner portion, that is, at the portion bounding the lumen, and stretched outwards; also as a thin layer, along the cell-sides at a variable

distance from the lumen. In an alveolus, during secretion the cells separate from one another slightly near the lumen. Thus the lumen stretches out for a short distance between the cells; it becomes, at the same time, larger by the diminution which takes place in the size of the cells. The above described changes occur, whether the secretion is induced by giving food to the animal, or by giving it pilocarpin, or by stimulating the sympathetic nerve running to the gland. The two zones of the fresh state are not preserved by alcohol and other reagents. Osmic acid shows considerable differences between the resting and the active gland, the chief amongst which is the more equal staining of the substance of each alveolar cell in the active state. *The parotid gland in the rat, cat, and dog* behaves, in rest and in activity, like the parotid of the rabbit in a corresponding condition. The living condition in these animals, however, has not been observed with intact circulation of the blood. In one case, where the sympathetic nerve of a dog was stimulated, a saliva of unusual character was obtained. The saliva clotted readily, and contained 8.3 per cent. of solids, of which 7.8 per cent. were organic substances. Jacobson's nerve was uncut. The much more rapidly flowing saliva, following subsequent injection of pilocarpin, had a slightly lower percentage of salts than the slowly secreted sympathetic saliva. In several other cases, Langley has seen a diminution in the percentage of salts, notwithstanding an increased rate of secretion of the fluid. *The submaxillary gland of the rabbit.*—Both in hunger and in digestion, the appearance of this gland in the fresh state is less constant than in the case of the parotid. It would appear that it is more independent of the intaking of food. The changes, though less marked, are in the main similar to those which occur in the parotid. The submaxillary gland has one very characteristic point, viz., the transition-cells, and at any rate some of the ductile cells, are crowded with granules much larger and more distinct than those of the alveolar cells. How far these disappear during secretion is uncertain. As in the parotid, so in the submaxillary, reagents do not preserve the normal appearances. The secreting gland, however, treated with osmic acid, shows alveolar cells much more evenly stained throughout than does the resting gland. The deep black staining of the transition-cells observed by Nussbaum, does not take place if the gland be treated with osmic acid only; the deep coloration is the result of subsequent treatment with alcohol. With osmic acid alone, the ducts stain darker than any other part of the gland. Langley upholds his previous objection to Nussbaum's view, that ferment is formed in the transition-cells and not elsewhere. Briefly, his objections were that the ductile cells, in their method and depth of colouring, behave like transition-cells, and that the black coloration of the transition-cells with osmic acid does not occur if the gland be previously treated with absolute alcohol, in which the ferment is said by Nussbaum to be insoluble. In the main, Langley confirms Bermann's description of a 'tubular gland' in the submaxillary gland of the rabbit. *The infra-orbital and lacrymal glands of the rabbit* show an outer clear, and an inner granular zone in activity, even more distinctly than the parotid. In both these glands, osmic acid preserves more nearly the living appearances. The two zones, if present normally, are also present after treatment with osmic acid. *Mucous Glands.*—The changes which take place in these glands are not so readily followed as in the serous glands, and it is more difficult to obtain normal specimens for observation. The mucous glands, neither in rest nor in activity, show distinct granules. The alveoli do not show cell outlines, but are formed of a mass looking like ground glass. Soon after mounting, this appearance gives place to a granular one. Probably these granules are present in the perfectly fresh living cell, but have very nearly the same refracting index as the surrounding cell-substance, and so are not visible until some shrinking or swelling takes place. Assuming this to be the case, it is found that in the mucous cell, as in the cells of a serous gland, during secretion the granules disappear, and disappear first from the peripheral part of the cell. As the granules become more distinct in the mounted specimen, their cells run into the ductules and out into the surrounding fluid, and thus the action of re-agents upon these granules can be very readily watched. Under the action of osmic acid some swell up, lose their distinctness of outline, and then disappear; others lose their distinctness of outline, but do not disappear. A mass of these, so acted upon, cease to look like granules, and become an uneven fairly transparent clump; lastly, others become more refracting, and come out sharply as black dots.

3. *Ewald on Artificial Digestive Preparations.*—Ewald tested a series of such preparations, in order to ascertain which were the most reliable. A measured quantity of the ferment was added to a two per cent. solution of starch, to a weighed quantity of pure ox-fibrin, or hard-boiled white of egg. The mixture was then placed in a digesting oven until complete solution took place, and the movements of the stomach and bowel were imitated by agitation of the flask at regular intervals. Most of these preparations were foreign, and do not therefore demand detailed notice. Ewald recommends the soluble pepsinum Germanicum (Witte), and the powdered pepsin of Simon as most powerful. Savory and Moore's pancreatin he also found very efficacious, especially on starch. Ewald doubts, however, the utility of the administration of pancreas preparations, in so far as the trypsin fermentation is concerned, for, as Kühne has shown, the trypsin is destroyed by the action of pepsin, and loses its power of acting upon albumin in neutral or alkaline solutions. Pepsin wine, also, he does not recommend, because not only is it weaker than a corresponding quantity of the pure pepsin; but also it requires a considerable addition of acid, in order to reach the height of its action.

4. *Albertoni on Peptones.*—In investigating the action of digestive ferments on the blood, Albertoni noticed that the peptones, which are always to a greater or lesser degree mixed up with these ferments, exercised a very remarkable influence on the blood. He notes the results as follows. 1. Injection of peptones into the blood of dogs so acts, that the blood flowing from the animal completely loses its power of coagulation; but in the case of rabbits this action is not so decided. While a certain quantity of peptone, injected into the blood of a dog, suffices to destroy its power of coagulation, and this not merely for the time being, but for a considerable period, the same quantity in a rabbit is only sufficient to prevent coagulation for a few minutes. Since the same occurred in an experiment on a sheep, it is quite possible that there exists a difference between the blood of herbivora and of carnivora. 2. The quantity of peptone which was required to produce this action in the dog was very variable, and this

quantity appeared to stand in direct relationship to the quantity of leucocytes the blood contained. The more numerous the leucocytes, the weaker the action was. It is not necessary that the peptones should be pure. A few cubic centimètres of gastric juice in which fibrin has been digested, may be employed, after the action of the pepsin has been destroyed by boiling, and the fluid has been filtered. 3. It is more easy to obtain this action on the blood when the peptones are injected into the blood-vessels of the living animal, than when the blood is simply mixed with the solution outside the body. 4. The blood which has been prevented from coagulating by the action of peptones gives a white clot when it begins to decompose. 5. As the digestive ferments are always more or less mixed with peptones, it is to be observed that the latter take part in every action of the blood which has been ascribed (by Albertoni) to these ferments. 6. The peptones disappear very rapidly from the blood, and pass into the various organs and tissues of the body.

5. *Schmidt-Mülheim on the Physiological Significance of Peptones.*—From solutions of peptone all the albumen was removed by the addition of acetate of iron and boiling. By this, all the albumens are precipitated, provided that the solution has not a too strongly acid reaction. The quantitative estimation of the peptones in solution was performed colorimetrically, and was founded upon the well-known wine-red colour which peptone solutions assume when caustic soda and sulphate of copper are added. A standard solution for comparison was made by dissolving 1 gramme of peptone in 3,000 cubic centimètres of water. The error by this method of estimation did not exceed 6 per cent. In these experiments the author made use of the 'peptone' manufactured by Witte ; but this preparation was found to consist of more than one substance. If the solution of this peptone were boiled with acetate of iron, a substance separated out which the author names 'propeptone', leaving the peptone itself (which alone was made use of in these investigations) in solution. *The course of the peptone after it leaves the alimentary canal.*—The blood of hungering dogs contained no peptone ; but when the thoracic duct was ligatured immediately after a meal of meat, twenty-four hours afterwards the blood gave evidence of the presence of peptone (in one case 0.017 per cent., and in another 0.28 per cent.) The chyle on no occasion contained peptone. *The behaviour of peptone after entering the blood.*—In a series of experiments there was injected into the jugular vein of hungering dogs 6 to 10 grammes of peptone dissolved in half per cent. salt solution. Blood was drawn from the carotid from time to time. When the injection was slowly made it was found that in a very few minutes no peptone could be detected in the blood. If, on the contrary, the injection were rapid, the first quantities of blood taken were very rich in peptone. In one case there was detected a quantity of 0.967 per cent. after one minute, 0.015 after six minutes, and when ten minutes had been allowed to elapse no peptone could be discovered. The change in the peptone does not take place in the liver, according to these observations. What becomes of the peptone? The hypothesis that it is transformed into albumen was not supported by the results of these experiments. There was another action of peptones observed. Blood drawn from the body after the injection failed to coagulate, and this fluidity remained from one-half hour to one hour. The addition of fibrin-ferment, or of a small quantity of filtered decomposing albumen solution, at once produced coagulation in the blood. Rapid injection of a solution of peptone into the jugular vein produced an extraordinary depression in the blood-pressure. In one case, in a dog weighing 7.9 kilogrammes, 6 grammes of peptone were injected into the carotid artery. The blood-pressure at once fell from 208 millimètres to 12 millimètres, and the animal died of dyspnœa. The urinary secretion was completely suppressed, as was to be expected. The experiments indicate that great caution must be used in the therapeutic injection of peptones.

6. *Langley and Sewall on the Changes in Pepsin-forming Glands during Secretion.*—The main objects of these experiments were to find out whether a round of events took place in the gastric glands similar to what has been shown to be the case with regard to the pancreas and salivary glands ; and, further, whether in the mammals there are any differences in the behaviour of border and chief cells (the *Beleg-* and *Haupt-zellen* of Heidenhain), which would make their functions more certain. The chief results of these observations are given as follows. *The œsophageal glands of the frog.*—In the frog, three or four days after food, the alveoli are, in the living state, granular throughout. The outlines of the cells are not visible. Shortly after food is given, the granules thin away at the peripheries of the alveoli, and thus render the alveolar outlines more obvious. This thinning proceeds so rapidly, that in a few hours there is a well-marked clear zone in the outer part of each alveolus, the part nearest to the basement-membrane. Later, the clear zone becomes larger, the granular zone becoming smaller ; but as the clear zone enlarges it ceases to form in section a ring, and dips down into the granular zone at intervals. Nuclei are not seen either in the resting or in the digesting glands. Frogs in a bad state of health do not show the full granular condition characteristic of the normal healthy frog The granules are much less numerous, and often indeed do not extend to the basement membrane The granules we have hitherto spoken of may be called 'central' granules, to distinguish them from others which occur immediately beneath the basement-membrane. These border-granules are smaller and more highly refracting ; they occur usually in small clumps. The points mentioned above as observable in the fresh tissue, can also in the main be observed in glands treated with osmic acid ; the border-granules, however, stain more deeply and readily than the central granules. The mucous cells are fewer in the active than in the resting glands ; it is only in the fresh state that they appear granular. Whilst not prepared to deny that an increase of size may take place in the first stages of digestion, the authors have failed to observe it, and are inclined to think that as the granules are used up there is a steady diminution in the size of the glands. The granules they consider as stored up cell-products which, on suffering molecular re-arrangement during the secretion, give rise among other substances to the proteolytic ferment. The authors cannot agree with Nussbaum's view that the depth of staining with osmic acid is a trustworthy index of the amount of ferment present in the cells. On his view, it would appear that the border rather than the central granules should be connected with the ferment. *The gastric glands of the newt* (*Triton tæniatus*). —In the newt, the glands were observed through the muscular coat of the stomach with a rapid capillary circulation still going on. Twenty-four hours after

feeding, the glands of the fundus are thickly granular throughout; about three hours after feeding, the maximal change takes place; it corresponds in the main to that already described for the œsophageal glands of the frog. In the newt, the lumina and outlines of cells become more conspicuous, the clear zone is generally less sharply marked off from the granular zone; the star arrangement of the granules is caused by the presence of granules along the lateral margins of the cells. The glands recover their granular appearance comparatively quickly; in six hours after feeding, the granules have usually again crept up to the periphery; they then increase in number throughout the cells up to about the twenty-fourth hour. Later than this they diminish somewhat; in six days, the peripheries of the glands have become more sparely populated. It is at this period that digestion changes are most readily observed. The pyloric glands are clear, or very finely granular, in such observations as the authors made. No difference was observed in them between the hungry and the digesting states. *The gastric glands of the stickleback.*—In the gastric glands of the hungry fish, the granules thin away somewhat from the centre to the periphery, the lumina are inconspicuous. Three to four hours after feeding the lumina are much larger, the granules are aggregated about it, leaving a peripheral clear rim, the glands are more unequal in size, some having lost more granules and diminished more in size than others. *The gastric glands of mammals.*—In the glands of the fundus of the stomach of all mammals investigated, viz., dog, cat, rat, and rabbit, the chief cells are, in rest, crowded with conspicuous granules; the border-cells are either without conspicuous granules or are finely granular. During digestion, the granules in the chief cells diminish. The stomach of the rabbit has certain structural peculiarities; the principal of these is that a large portion of the greater curvature contains glands, in which the chief cells are not coarsely granular. The glands of the greater curvature contain scarcely more pepsin than the glands of the smaller curvature and pylorus, but in the latter there are few if any border-cells, whilst there are many in the greater curvature. Hence it follows that the border-cells are not directly connected with the formation of pepsin. The glands of the fundus contain a very much larger amount of pepsin than the glands of the greater curvature; that is, where there are coarsely granular chief cells there is a large amount of ferment. Further, during digestion the fundus-glands contain less ferment than in hunger—a fact observed first by Grützner; and it is during digestion that the chief cells have fewest granules. Hence the conspicuous granules in the chief cells are directly connected with the formation of ferment. Since, in passing from the fundus to the greater curvature, we meet all stages of granularity in the chief cells, and since the chief cells of the greater curvature, do not differ in any essential point from the pyloric gland-cells, it may be concluded with Heidenhain that the pyloric gland-cells and the chief cells of the fundus are fundamentally the same. The authors consider, however, the chief cells of the fundus to be a highly differentiated form of the pyloric gland-cells; a form more especially designed for the production of pepsin, and probably other solids of the gastric secretion. It is only in the rabbit that this differentiation is confined to the fundus of the stomach; in the dog, cat, and rat it extends also to the greater curvature. In these latter animals the area of distribution of coarsely granular chief cells is, roughly speaking, the same as that of the border-cells.

J. GRAHAM BROWN, M.D.

PSYCHIATRY.

RECENT PAPERS.

1. SEPILLI, G., and RIVA, G.—The Senile Form of General Paralysis. (*Rivista Sperimentale di Freniatria e di Medicina Legale*, Anno vi, Fasc. 1 and 2.)
2. TAMBURINI, A.—On the Genesis of Hallucinations. (*Ibid.*)
3. BUCCOLA, G.—Fixed Ideas, and their Physio-Pathological Conditions. (*Ibid.*)
4. URQUHART, A. R.—Case of Microcephalic Idiocy. (*Brain*, July 1880.)
5. MANN, E. C.—Contributions to the Study of Mental and Nervous Diseases, with Cases illustrative of Treatment. (*Journal of Nervous and Mental Disease*, Chicago, July 1880.)
6. KIERNAN, J G.—The Psychoses of the Secondary Fever of Syphilis. (*Ibid.*)
7. GRAY, L. C.—The Diagnostic Significance of a Dilated and Mobile Pupil in Epilepsy. (*Ibid.*)
8. SPITZKA. E. C.—Race and Insanity. (*Journal of Nervous and Mental Disease*, Chicago, October 1880.)
9. KIERNAN, J. G.—Mania Transitoria. (*Ibid.*)
10. KIERNAN, J. G.—Folie à Deux or Folie Communiquée. (*Ibid.*)
11. KIERNAN, J. G.—The Use of Ergot in the Treatment of the Convulsions of General Paresis. (*Ibid.*)
12. BROWNE, J. CRICHTON.—A Plea for the Minute Study of Mania. (*Brain*, October 1880.)
13. Protection of the Insane. (Boston, 1880.)
14. ROUSSEAU.—On the Treatment of Alcoholism and Acute Delirium by Cold Baths and Bromide of Potassium. (*Annales Médico-Psychologiques*, September 1880.)
15. COTARD, JULES.—On Hypochondriacal Delirium in a Severe Form of Anxious Melancholia. (*Ibid.*)
16. RÉGIS, E.—On Saturnine Encephalopathy in its Relations to General Progressive Paralysis. (*Ibid.*)
17. BALL and RÉGIS.—Case of 'Folie à double forme continue.' (*Ibid.*)
18. FOVILLE, A.—Cases of Congestive Mania. (*Ibid.*, July and September 1880.)
19. FOVILLE, A.—Case of Mania with Grandiose Delusions, in an old Hemiplegic. (*Ibid.*, September 1880.)
20. BAILLARGER.—General Paralysis in a Woman Hemiplegic for Eleven Years. (*Ibid.*)
21. MABILLE.—General Paralysis, following an Attack of Cerebral Congestion in a Lypemaniac. (*Ibid.*, July 1880.)
22. DESPINE, P.—The Clinical Study of Mental Diseases and Psychology. (*Ibid.*, November 1880.)
23. FOVILLE, A. — Megalomania, terminating, after Twenty-two Years, in Dementia with Generalised Delusions. (*Ibid.*)
24. ALLEN, NATHAN.—Asylum Supervision. (*Journal of Psychological Medicine*, vol. vi, part 2.)
25. WOOTON, EDWIN.—The Centralisation of Energy. (*Ibid.*)
26. MANN, E. C.—Psychological Aspect of the Laros Case at Easton, Pennsylvania. (*Ibid.*)

1. *Sepilli and Riva on the Senile Form of General Paralysis.*—The joint authors of this paper (*Rivista Sperimentale di Freniatria e di Medicina Legale*, Anno vi, Fasc. 1 and 2) report very fully the details of a case of this nature. Good figures and descriptions are given of the microscopic appearances seen in the cortex of the brain; the most remarkable of these were a great number of microscopic aneurisms situated on the arterioles which

supply the cortical layers, and have their origin in the pia mater. After discussing much of the literature of the subject, the writers submit the following conclusions. 1. Cerebral aneurisms may result from endo-arteritis of very small vessels; they may be due either to a dilatation of the vascular parietes, or to an accumulation of blood in the lymphatic space. 2. The most salient anatomical changes found in the senile form of general paralysis are the presence of minute aneurisms as described above, hyperplasia of the interstitial connective tissue of the brain, adipose and pigmentary degeneration of the nerve-cells, and diffuse atheroma. 3. The chief clinical symptoms which distinguish the senile from other forms of general paralysis, are the atheromatous pulse, the less severe nature of the apoplectiform attacks, the very slight tendency to elevation of temperature, and the absence of those periodical recurrences of pyrexia which point to aggravation of the meningo-cortical process. The progressive mental weakness which accompanies the paralysis is characterised by aberrations of an affective character, and is without any trace of ambitious or expansive delirium.

2. *Tamburini on the Genesis of Hallucinations.*—In *the Rivista Sperimentale di Freniatria e di Medicina Legale*, Anno vi, Fasc. 1 and 2, Professor Tamburini discusses this subject at some length, and concludes as follows. 1. Hallucinations necessarily have their seat in the sensory cortical centres, where the impressions received from the organs of the senses are perceived. 2. Hallucinations consist of a morbid excitement of the sensory centres of the cortex, analogous to that which, occurring in a motor centre, may produce cortical epilepsy; the one has abnormal sensation, and the other abnormal motion, for its result. 3. This morbid irritation may either arise spontaneously, or it may be due to irritation in the peripheral organs of the senses, in the conducting nerves, in the sensory ganglia at the base, or in the white medullary conducting fibres; it may also be due to morbid activity commencing in the centres of ideation. In the first case the origin of hallucination is central, in the second, either peripheral or in the conducting media, in the third it is intellectual; but in every case the sensory centre plays a most important part, for, if it be unaffected, no real hallucination can exist. 4. An illusion is merely an hallucination in which the morbid excitement of the sensory centre is due to a real impression received from without. This nervous impression, however, acting upon a nervous centre in a state of abnormal irritability, becomes transformed by it into a sensation other than the true one.

3. *Buccola on Fixed Ideas.*—In this paper (*Rivista Sperimentale di Freniatria e di Med. Legale*, Anno vi, Fasc. 1 and 2) Dr. Buccola reviews a great deal that has been written during recent years, especially in German, upon this subject, and relates several typical cases. He argues that, in this malady, the abnormality of association of ideas is due to the abnormal functional activity of small groups of cells, which, not diffusing their energy, vibrate with such preponderance as to impede and overpower the contemporaneous manifestations of the other groups of cells situated in the cerebral cortex, and with which it is necessary that they should act in harmony, in order that a healthy equilibrium may be maintained by the mind.

5. *Mann on Dipsomania and the Opium Habit.*—Dr. Mann reports (*Journal of Nervous and Mental Disease*, July 1880) that the treatment which he practises and finds successful in cases of periodical dipsomania, is the total withdrawal of stimulants; phosphorus is administered in cod-liver oil; insomnia is relieved by prolonged warm baths at bed-time, aided if necessary by monobromide of camphor or gelsemium, with sodium and chloral. Most important of all, constant and induced currents of electricity are administered once or more daily. This acts far more beneficially upon the exhausted and morbidly sensitive nervous system than the nerve stimulants usually prescribed; by its use the processes of nerve-growth and repair are hastened. The negative electrode being applied at the lower end of the spine or the pit of the stomach, the positive pole is applied to the head, the cervical sympathetic, the cilio-spinal centre (or region over or on each side of the seventh cervical vertebra), and up and down the spine, during a sitting of fifteen or twenty minutes. The use of electricity seems to supply to the system, in cases of inebriety, the stimulus which has been withdrawn. Patients often reported that under its use they experienced little, if any, of the terrible feelings produced by the withdrawal of stimulants under ordinary circumstances. In speaking of the opium and morphia habit, the author notes, as a most frequent and troublesome symptom, a general hyperæsthesia, painful nervous susceptibility, and intractable neuralgia. His treatment consists in considerably reducing the habitual dose of opium at once, then gradually diminishing it until total withdrawal is reached in ten or twelve days. Warm baths and sedatives are given to obviate sleeplessness; electricity in the form of general faradization, a tonic mixture containing strychnia or phosphorus, and cold sponge baths aid the recovery of the nervous system. Cases of cure are reported in which, after an interval of several years, no relapse has taken place.

6. *Kiernan on the Psychoses of the Secondary Fever of Syphilis.*—Four cases are reported (*Journal of Nervous and Mental Disease*, July 1880) and the following conclusions are deduced. The mental symptoms, due to the secondary fever, are analogous to those produced by alcohol, narcotics, and essential fevers. Mickle's opinion that it is not necessary to make a separate symptom-group for syphilitic psychoses is supported. Mercurial inunction yields the best results, but mechanical restraint is necessary to its proper application. Asylum treatment is not advisable if it can be avoided.

7. *Gray on the Dilated and Mobile Pupil of Epilepsy.*—In a paper read before the American Neurological Association, Dr. L. Carter Gray draws attention to a dilated and mobile pupil as of great diagnostic value in epilepsy. He had examined forty-nine epileptics with regard to this symptom, and found only four doubtful exceptions among them. The mobility and dilatation were usually, though not always, in proportion to the inveteracy and violence of the disease. The observations apply only to cases of true functional epilepsy. In a discussion which followed the reading of the paper, it was remarked that a similar condition of the pupil is very commonly present in the insanity of masturbation.

8. *Spitzka on the Relations of Race to Insanity.*—Taking advantage of the opportunity afforded by the large foreign population of New York, and the statistics for a series of years of the New York City Asylum for the Insane, Dr. Spitzka has been studying the relation of races to insanity in general, and of each race to each particular form of insanity; he gives his figures, arguments, and conclusions, in an able paper contributed to the October number of the

Journal of Nervous and Mental Disease. The following conclusions seem fairly to be established by the facts given.—The different forms of insanity occur in nearly the same proportions in the Anglo-Saxon, Teutonic, Celtic, and Hebrew races; paralytic insanity is most common among Anglo-Saxons and least common among Negroes; melancholia is most common among the Germanic peoples; the tendency to terminal dementia is greater in the Anglo-Saxon than in the German or Celt; and the forms dependent upon hereditary taint are most common among Hebrews. With this it is in accord that, since the termination in dementia and the influence of heredity are the factors which chiefly cause an accumulation of the insane population, the Hebrew and the Anglo-Saxon should have the highest proportions insane of their respective populations. The author finds that paralytic insanity is more frequent among races of a high than a low cerebral organisation, and believes that syphilis plays about the same *rôle* in its causation in all the races named, excepting the Negro, with whom it is in excess. The comparative immunity of the Hebrews is attributed to the fact that they have for centuries been preparing themselves by their commercial tendencies for the excitement and general activity of the nineteenth century, and are thus far less injured by it than are descendants of artisans and farmers who are thrown upon the turmoil and routine of business, with brains unprepared by hereditary influence. The Celtic race is found to be quite as subject to paralytic insanity as the Teutonic peoples. The author's figures tend still further to discredit the belief in the relation of sexual excess to the paralytic insanities, as a primary cause.

9. *Kiernan on Transitory Mania.*—Dr. Kiernan (*Journal of Nervous and Mental Disease*, October 1880) relates two cases, and claims recognition for 'mania transitoria' as a distinct psychosis. It is an ordinary form of acute mania, characterised by the brevity and explosive character of the violence; it rarely relapses, seldom lasts more than six hours, and always occurs in individuals sane before and after the attack. Neither prodromata nor sequelæ are apparent, unless the turgid hands and slumber be regarded as such. Its predisposing causes are heredity and an excitable temperament. The exciting causes may be alcoholic excess, insolation, physical exhaustion, violent emotion or mental strain. The patient is apt to commit violence during the attack, of which he retains no after-remembrance. The disease tends of itself to recovery; it is analogous to the psychoses which take the place of epileptic seizures. The plea of transitory mania is liable to much abuse in criminal cases.

10. *Kiernan on 'Folie a deux' or 'Folie Communiquée.'*—Thirteen cases are related by Dr. Kiernan (*Ibid*). The author concludes that *folie a deux*, considered in its wider relations as affecting the insane, is not exceptionally rare; that the same conditions obtain among the insane as among the sane, the active agent being usually an intellectual chronic maniac, the passive recipient an insane patient whose mind is enfeebled, the case being here more properly a *folie communiquée* than, strictly speaking, a *folie a deux.*

11. *Kiernan on the Treatment of the Convulsions of General Paresis by Ergot.*—The drug was usually given by the mouth in the form of fluid extract; its use was originally recommended to Dr. Kiernan by Dr. E. C. Spitzka. The former now records (*ibid.*) a number of cases, and reports that ergot exercises a decided influence over the convulsions of general paralysis, its effects being most marked in the apoplectiform attacks.

12. *Browne on the Minute Study of Mania.*—In this paper, published in the October number of *Brain*, Dr. Crichton Browne warmly advocates the more minute study of the symptoms of mania, with a view to determining with more or less precision the position of the brain-lesions upon which the mental disease depends. It is considered as proved that there is localisation of function in the brain; also that insanity is a disease of the brain which does not always involve the whole of that organ, but which, in a large majority of cases, is localised in certain regions of it. The pathological changes which subtend mania probably partake of the character of an erythema, and are not spread over the whole of the brain, but limited to certain regions. Attention is directed to the vinous staining, due to capillary congestion of the grey and white matter, which is found after death during acute mania. This staining is not generally diffused; in the medullary substance it occurs in scattered blotches; in the cineritious matter it is also very unequally distributed, both in the layers of that substance and over its superficies. These facts are mentioned to indicate that the pathological changes in mania do not implicate the whole of the cortical substance of the hemispheres. During the course of the disease, certain functions of the highest nerve-centres are manifestly perverted, and experiment is teaching us to regard these functions as dependent on certain brain-territories. Careful observation, therefore, of these perverted functions, especially if they can be clearly differentiated, should enable us to determine what brain-territories are implicated by the lesions or functional derangements on which mania depends. Certain peculiar, persistent, and purposeless movements seen in maniacal patients are of special value in this connection. The earliest motor symptoms should be carefully noted, and also their order of succession as the disease advances; for this order of succession, if it could be ascertained, would disclose the line of march of the disease over a certain district of the cerebrum. It is pointed out that much useful information may also be gained from sensory symptoms, especially at the commencement of the malady. The improved results of treatment which may be anticipated when cerebral lesions can be accurately localised are thus hinted at. 'In the progress of pharmacology, it has been established that certain drugs act specifically on certain centres in the spinal cord, medulla oblongata and basal ganglia; and it is not too much to anticipate, when certain functional areas and centres have been satisfactorily differentiated in the brain, we shall soon be put in possession of means of modifying their activity, and of arresting some of the disordered states into which they are liable to pass.'

13. *Protection of the Insane.*—Under this title are published the proceedings of the inaugural meeting of the American National Association for the Protection of the Insane and the Prevention of Insanity. In a paper on the necessity for such an Association, Dr. G. M. Beard propounds his well-known views of the relations subsisting between education, civilisation and insanity. He considers insanity to be 'part of the cost of liberty' and 'a tax upon our freedom'. A paper by Dr. J. C. Shaw points out the advantages of the non-restraint system, and demonstrates that it is as practicable in the asylums of America as in those of other countries. Dr. E. C.

Seguin contributes a paper on lunacy laws, the necessity for reform, and the abolition of the habitual use of restraint.

14. *Rousseau on the Treatment of Acute Delirium.*—Dr. Rousseau, of the Auxerre Asylum, remarks (*Annales Méd.-Psychol.*, September 1880) that recognised methods of treatment are usually successful in ordinary cases of alcoholism, but that medicine is hitherto powerless in certain cases, when, even after the elimination of the poison, delirium and fever, due to cerebro-meningeal irritation, and inflammation of part of the vascular system, continue unabated. In 1877, Dr. Féréol recorded a case of delirium tremens, with severe cerebral complications, which was treated, with the best results, by cold baths and large doses of bromide of potassium. Dr. Rousseau has since been treating a number of simple cases of alcoholism with the bromide of potassium, and concludes that, when given in sufficient doses, it succeeds perhaps better than opium, especially if the treatment be commenced early. In two very severe cases, one of alcoholism and the other of acute delirious mania, the prolonged cold bath was used in addition to the administration of the bromide. Both cases were admitted late in the day, in each a draught containing ten grammes of bromide of potassium produced no soothing effect whatever; each was treated next day by a cooling bath, lasting seven hours, cold affusion being applied to the head, and the bromide being continued. In both cases the patient became calm after being several hours in the bath, and in both the result was permanent, the patient being only somewhat dull and confused for a day or two, but sleeping well at night and making rapid recovery. One was discharged well in ten days, and the other in twelve days after admission. In the first case, that of alcoholism, the bromide of potassium was continued as a precautionary measure for five days; during that time over an ounce and a half of the salt was administered. In the second case (acute delirium) the symptoms had been coming on for over a week; the delirium was very acute at the time of admission, and the signs of active cerebral hyperæmia were present. After the bath, the patient was purged daily for five days by calomel and aloes; he has remained quite well for a year. [It is to be regretted that the paper gives no definite information as to the temperature of the baths used, for a really cold bath lasting seven hours is a heroic measure of treatment. The effects upon the temperature, pulse and respiration of the patient, are unfortunately also not recorded.—*Rep.*]

15. *Cotard on Hypochondriacal Delirium.*—In the September number of the *Annales Médico-Psychologiques*, Dr. Jules Cotard describes a series of delusions which are sometimes met with in cases of *melancholie anxieuse*, under the name of 'hypochondriacal delirium'. He gives the case of a lady, aged 43, as typical of a class. The patient affirmed that she had neither brain, nerves, chest, stomach, nor bowels, all that remained of her was skin and the bones of a disorganised body; she also stated that she had no soul, and that neither God nor the devil had any existence, although she had previously believed firmly in all three. Being only a disorganised body, it was not necessary for her to eat to live; she could not possibly die a natural death, but would exist eternally unless she were burnt, which was her most ardent desire and request. Baillarger and others have shown that a similar group of delusions sometimes occurs in cases of general paralysis of the insane. Dr. Cotard discusses the literature of his subject, and points out the distinction between the cases he is describing and others which bear some resemblance to them. If this class of cases be detached from others, the author would consider the following as its characteristics:—Melancholic anxiety; belief of being damned or possessed; propensity to suicide or voluntary mutilation; analgesia; hypochondriacal ideas as to the non-existence or destruction of divers organs, of the entire body, of the soul, of God, etc.; belief in incapability of death.

16. *Régis on Lead-Poisoning and General Paralysis.*—Two views have hitherto been held on this subject:—1. That there is a genuine saturnine form of general paralysis, distinguished from the typical disease only by certain symptoms; 2. That mental disease resulting from lead-poisoning might so nearly simulate general paralysis as to justify the use of the term 'Saturnine pseudo-general paralysis'. Dr. Régis now (*Annales Médico-Psychologiques*, September 1880) believes himself justified in concluding that saturnine general paralysis has no existence; that although saturnine encephalopathy may, in certain cases, much resemble general paralysis, it must on no account be confounded with it, as the paralytic symptoms are mostly temporary in character, and are due only to saturnine intoxication. Two cases are related in detail of men who had been lead-workers, and who, when admitted to the asylum, were apparently in the last stage of general paralysis. Both, however, perfectly recovered in the course of a few months, and have since resumed their usual occupations. The author cautions us against assuming that any given case of general paralysis is due to lead-poisoning, simply because the patient has been exposed to lead, and has at some previous time suffered from its toxic effects.

21. *Mabille on General Paralysis supervening in Melancholia.*—The case is related (*Annales Médico-Psychologiques*, July 1880) of a man, aged 29, who was acutely melancholic and suicidal for about seven months; at the end of this time he appeared to be improving slowly; but an attack of cerebral congestion, with loss of consciousness, occurred suddenly, and next day, the patient having recovered consciousness, was found to be full of the large delusions characteristic of general paralysis; he had also unequal pupils and his speech was hesitating. From this time symptoms of general typical paralysis continued; but the case is at present an unfinished one.

24. *Allen on Asylum Supervision.*—This paper was read before the National Conference of Charities at Cleveland, Ohio, and is published in the *Journal of Psychological Medicine*, vol. vi. It is a contribution to the movement in favour of the reform of the lunacy laws, which is daily gaining strength in the United States. The necessity of State supervision of all asylums, similar to that exercised in this country by the Lunacy Commissioners, is specially insisted on.

25. *Wooton on the Centralisation of Energy.*—In this paper (*Journal of Psychological Medicine*, vi, 2) the author traces the development of the nervous system from the lowest forms of animal life up to man. He concludes that percipience and volition are the properties of the simplest protoplasm; they first find a differentiated locus in one or more ganglia. They are then elaborated to a greater extent in one ganglion (the cephalic), which sends back a process and forms with it the cerebro-spinal axis. This axis now assumes the totality of certain properties lately common to the ganglia, and gra-

dually centralises these faculties in its anterior extremity and cephalic ganglion. With this centralisation, the reflex function of the non-cephalic ganglia extends into the cord, and a coincident structural elaboration of the whole nervous system occurs. Percipience and volition, therefore, are throughout the invertebrata and lower vertebrata not confined to the cephalic ganglion or brain.

C. S. W. COBBOLD, M.D.

SYPHILOGRAPHY.

RECENT PAPERS.

1. MAURIAC.—On the Constitutional Symptoms which occur during the Prodromal Period of Syphilis. (*Lyon Médical*, Nos. 31, 32, 34, 1880.)

2. ATKINSON, I. E.—Two Cases of Syphilis occurring very Early in Life. (*Archives of Dermatology*, July 1880, p. 241.)

3. GAMBERINI.—Pulmonary Syphilis. (*Giornale Italiano delle Mal. Ven. e della Pelle*, Aug. 1880.)

4. SCARENZIO.—On Reflex Arthropathies from Urethritis. (*Ibid.*)

5. VAJDA.—Can Syphilis acquired by the Mother during Pregnancy be Transmitted to the Child *in Utero?* (*Wiener Medizinische Wochenschrift*, Nos. 30, 32, 1880.)

6. DUPLAY.—Two Cases of Syphilitic Myositis. (*Archives Générales de Médecine*, Aug. 1880, p. 218.)

7. HYDE, J. N.—On Chancre of the Meatus and Urethra in the Male. (*Chicago Medical Journal and Examiner*, Aug. 1880.)

8. LANDOWSKI, PAUL.—Vaccinal Syphilis. (*Journal de Thérapeutique*, Aug. 25, 1880.)

9. ZEITLIN.—On the Successful Treatment of Urethritis by the Internal Administration of Chlorate of Potash. (*Centralblatt für Chirurgie*, No. 35, 1880.)

10. HOLM, N.—On the Temperature of Syphilitic Young Children. (*Hospitals-Tidende*, 1880; and Schmidt's *Jahrbücher*, Sept. 1880.)

11. ZEISSL.—On Excision of the Initial Sclerosis of Syphilis, and on the Treatment of Syphilis. (*Wiener Med. Presse;* and Schmidt's *Jahrbucher*, Sept. 1880.)

12. KLEBS.—On the Inoculation of Syphilis on Animals, and on the Nature of the Syphilitic Contagious Principle. (*Beiträge zur Pathologischen Anatomie*, edited by E. Klebs, Prag., 1880, Heft 2, p. 87.)

13. SCHÜLTZ, EMIL.—The Anatomy of Syphilis in New-Born Children. (*Ibid.*, p. 92.)

14. DIDAY.—Antisyphilitic Vaccination. (*Lyon Médical*, Sept. 26, 1880.)

15. GIBIER.—A Case of Syphilitic Chancre in an Unusual Position. (*L'Union Médicale*, No. 127, 1880.)

16. SCHIRAJEW.—On Hard Chancres of the Tonsil. *St. Petersburger Med. Wochenschrift*, No. 39, 1880.)

17. OTT.—Galloping Syphilis. (*L'Union Médicale*, Oct. 16, 1880.)

18. LABAT.—Congenital Syphilitic Pemphigus. (*Progrès Médical*, Oct. 23, 1880.)

19. FOX, G. H.—On the Diagnosis of Cutaneous Syphilis. (*New York Medical Journal*, October 1880, p. 382.)

20. MACKENZIE, JOHN N.—Congenital Syphilis of the Throat, based upon the Study of 150 Cases. (*American Journal of Medical Sciences*, Oct. 1880.)

21. WOOD, H. C.—Contribution to our Knowledge of Nervous Syphilis. (*Ibid.*)

22. FOURNIER.—The Simulation of Venereal Assaults in Young Children. (*Bulletin de l'Academie de Méd.*, No. 43, 1880.)

23. TYSON.—Syphilitic Enlarged Spleen in a Child. (*Lancet*, Oct. 23, 1880.)

24. NETTLESHIP.—Paralysis of Cranial Nerves in Congenital Syphilis. (*Ibid.*)

25. BADER.—Treatment of Gonorrhœal Ophthalmia. (*British Medical Journal*, Nov. 13, 1880.)

26. HUNT, JOSEPH.—Two Cases of Syphilitic Cerebral Disease. (*Med. Times and Gazette*, Nov. 13, 1880.)

27. DOWSE.—On Syphilitic Ataxia, and the Pre-ataxic Stage of Locomotor Ataxy. (*Med. Press and Circular*, Nov. 24, 1880.)

28. PRICKETT.—An Unusual Case of Congenital Syphilis. (*Lancet*, Dec. 18, 1880.)

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1. *Mauriac on the Constitutional Symptoms which occur during the Prodromal Period of Syphilis.*—The following is a *résumé* of M. Mauriac's views on this subject, as set forth in a lecture published in Nos. 31, 32, and 34 of the *Lyon Médical*, 1880. There is never any constitutional disturbance before the appearance of the chancre. The interval between the chancre and the manifestation of constitutional disturbance ought to be called secondary, or constitutional, or syphilitic incubation, to distinguish it from the period of incubation which intervenes between contagion and the appearance of the initial lesion. The duration of this secondary incubation varies considerably. In a large number of cases where the disease was left to itself, the author found that it ranged between forty-five and sixty days. The appearance of general symptoms may be influenced in various ways. 1. *Specifics.*—The influence of these has been exaggerated. Often, in spite of mercury having been given from the first appearance of the chancre, the period of incubation is not delayed. 2. *Season.*—The stages of syphilis are shorter, and succeed each other more quickly in hot than in cold climates; but in our own climate the variations of temperature are too feeble to exercise much influence in this respect, except in unusually severe seasons. 3. *Intercurrent Maladies.*—Fevers and inflammations are those which most manifestly prolong the incubation of syphilis. The following are the prodromata of secondary syphilis: *a*, syphilitic fever; *b*, pain of various kinds, *i.e.*, nocturnal headache, neuralgia, muscular pains, osteocopic pains, arthralgia, pleurodynia, lumbago, etc.; *c*, encephalic troubles; *d*, cardio-pulmonary disturbances; *e*, disturbance of nutrition, with or without asthenia of the functions of the sympathetic nervous system. All these prodromata occur much more frequently in women than in men. In most men, syphilis produces its first effects without disturbing the general health. In women, slight headache, malaise, and sweating are the most usual prodromata. The constitutional troubles generally cease when the exanthem appears, but sometimes they persist during the secondary stage, and may even cause a state of cachexia. In most cases the prodromal symptoms have no special gravity, and disappear spontaneously, or under specific treatment. They are of no value as regards prognosis; sometimes a mild course of syphilis is preceded by severe general disturbance, while a grave or even malignant form of the disease may occur when there has been no marked physical or functional disturbance at the outset. *Syphilitic Fever.*—The frequency of this has probably been exaggerated. In most patients, it is exceptional or very slight. It is infinitely more common in women than in men. Syphilitic fever never occurs during the first week of the chancre, but only when the general intoxication reveals itself; this is usually about eight to fifteen days before the appearance of the rash. The fever is generally intermittent, rarely continued. The attacks occur at irregular intervals, and are often incomplete. Sometimes the fever comes on abruptly; sometimes it is preceded for a few days by general malaise, headache, etc. The *intermittent form* consists of a

series of fits, which come on almost always towards evening, and in this respect resemble hectic much more than ague. Each fit lasts eight or ten hours, is followed by a period of complete apyrexia, and the attack does not return with the almost mathematical regularity of malarial ague; very frequently one stage may be absent. Violent shivering is very rare; much more usually there are repeated slight shivering fits, which precede the fever by some hours. The hot stage is much more constant than the cold stage. The sweating stage is very rarely absent; indeed, in some cases it is so prominent a feature that it seems to constitute the whole fit, and may last all the night. Intermittent syphilitic fever is nearly always quotidian, but the author has seen the tertian variety, and gives a case of this form. One most remarkable character of syphilitic fever is its slight influence on the general health. The tongue often remains clean and moist, and the appetite unimpaired. M. Mauriac has never observed boulimia or polydipsia in men. The spleen is not usually affected, but if it be slightly enlarged, never to the extent observed in malarial fever. The *remittent form* of syphilitic fever is less common than the preceding, but, like it, lasts a week or a fortnight. The fever never completely ceases. The exacerbations have no regularity; they occur sometimes in the morning, sometimes in the evening; and are generally more incomplete and irregular in their stages than the intermittent form. The remission is always longer than the attack. This form is more serious than the intermittent, and affects the aeneral functions more severely. There are nearly glways violent headache, general malaise, etc., and sometimes insomnia and asthenia, of a typhoid character. The digestion, however, is often normal. A third form of syphilitic fever has been described by some authors, but it is really only a mixture of the two preceding forms.

2. *Atkinson on Two Cases of Syphilis occurring very Early in Life.*—Dr. I. E. Atkinson, of Maryland, publishes the particulars of two cases of acquired syphilis in children (*Archives of Dermatology*, July 1880, p. 241). Case 1.—A mulatto boy, aged 10, had a hard sore on the prepuce, and double inguinal adenopathy; afterwards, roseola, papular syphilide, general adenopathy, etc. Case 2.—A girl, aged 8, cousin of the boy in the preceding case. Her symptoms were said to have appeared before those of the boy. Dr. Atkinson found, on examination, general alopecia, roseola, general glandular enlargement, and mucous patches of the vulva. The vagina would only admit a crow-quill. Both children denied any attempt at sexual intercourse.

3. *Gamberini on Pulmonary Syphilis.*—In a recent article on syphilis of the lung (*Giornale Italiano delle Mal. Ven. e della Pelle*, August 1880), Professor Gamberini relates the following cases which came under his observation, and which he considered to be instances of early syphilitic disease of the lung. Case 1.—A man, aged 32, of healthy antecedents, contracted a hard sore on the prepuce, which was followed by papular angina. The symptoms yielded to mercury. Four months afterwards, difficulty of breathing came on, and soon became so severe that he returned to Gamberini's clinic for relief. On examination, the left side of the chest moved less freely than the right. There was also a localised patch of dulness between the third and fifth ribs on the left side of the chest, with deficient respiratory murmur. The remainder of the chest was normal. There was enlargement of the inguinal, axillary, and cervical glands. Dyspnœa and general malaise were complained of, but there was little or no cough, nor expectoration, and no fever. Under the administration of iodide of sodium gradually increased to 3 grammes (45 grains) daily, all signs of the lung affection disappeared in forty days. Case 2.—A man, aged 27, of previous good health, and with no family history of tubercle, came under treatment for pain at the lower part of the chest, cough and expectoration, with fever. He had at the same time an indurated cicatrix on the frænum, and multiple glands in the groins. A few days afterwards, a lenticular syphilide and erythema of the fauces appeared. The chest was well formed, but the right side moved less freely than the left during respiration. In front, percussion showed no difference between the two sides, but behind, on the right side, there was diminished vocal resonance in the supraspinous and infrascapular regions, with deficiency of the respiratory murmur in those situations. In front, on the right side, inspiration was interrupted, and weaker than on the left, and coarse crepitating *râles* could be heard. The spleen was slightly enlarged. The other viscera were normal. Mercury was given by the mouth, and also by subcutaneous injection, for about three weeks, and subsequently iodide of sodium. The patient recovered in a month. The temperature in this case never exceeded 101.4 deg. Fahr. The expectoration was at first yellowish-white, then became rusty and tenacious; subsequently it was mucous in character, and finally ceased altogether. The author concludes his paper with some propositions, of which the following are the chief. The existence of a simple inflammatory syphilitic pneumonia is admissible, but is not yet proved. There can be no doubt about the existence of gummy disease of the lung, for which the author proposes the name of 'consumptive pulmonary syphilis'. Specific treatment is the best therapeutic means at present known for distinguishing syphilitic from tubercular disease of the lungs. The occurrence of pulmonary disease is not rare, either in late or early acute syphilis. Laryngeal lesions often precede or accompany the affection of the lungs, and the former may be of great value in the diagnosis of the latter. The symptoms of syphilitic disease of the lung are generally those of pneumonic phthisis. Even after death, tubercle cannot always be distinguished from gumma. Tubercle usually attacks the apex of the lung, while syphilis usually (but not always) avoids it. The course of syphilitic pulmonary disease is usually slow and apyretic. Syphilis most usually attacks only one lung, and often only one part of a lung.

5. *Vajda: Can Syphilis acquired by the Mother during Pregnancy be Transmitted to the Child in Utero?*—Dr. Vajda enters at considerable length (*Wien. Medizin. Wochensch.*, Nos. 30, 32, 1880) into this question, touching on many of the cases hitherto recorded which bear on the point. He comes to the conclusion that a mother can infect her offspring *in utero*, and doubts the correctness of the view which holds that a mother can produce a syphilitic child without being herself syphilitic. The following illustrative case is given. Between the 20th and 24th of June 1878, a man contracted syphilis and returned to his wife, who was at that time in the fifth month of pregnancy. On August 10th, Vajda examined the wife, and found her healthy; she became infected on September 9th, and on October 17th a hard chancre and indolent glands were present. The child was born at term, but a papular eruption appeared seven weeks after birth. Psoriasis and pustules followed. The author states that extra-

uterine infection could be excluded in this case, as well as a previous attack of syphilis in either parent.

6. *Duplay on Syphilitic Myositis.*—M. Duplay reports (*Archives Gén. de Méd.*, August 1880, p. 218) two cases of syphilitic disease of the muscles. Case 1.—A man, aged 69, with no history of syphilis, but having syphilitic tubercles of the chest and double orchitis, was admitted under the care of M. Duplay. There was also, on admission, a tumour five finger-breadths long and four broad, situated a little below the middle of the right thigh on its inner aspect. The tumour had been growing four weeks, and was of the size of a pea when first noticed by the patient. It was hard and somewhat uneven. The skin moved freely over it. On putting the sartorius into action, the swelling was found to be in the substance of that muscle. The tumour rapidly diminished in size under mercury and iodide of potassium, but the syphilide and the testes remained unchanged. Case 2.- A woman, aged 27, applied for relief on account of a tumour of the left cheek, which she had first noticed five months previously. On examination, a hard swelling was found just above the insertion of the masseter into the lower jaw. The tumour was movable when the masseter was relaxed, but fixed when that muscle was contracted. There was also another swelling at the sternal insertion of the sterno-mastoid. No other signs of syphilis could be discovered. Under treatment by mercury and iodide of potassium both swellings gradually disappeared. There was no history of syphilis in this case.

7. *Hyde on Chancre of the Meatus and Urethra in the Male.*—Dr. J. Nevins Hyde records (*Chicago Medical Journal and Examiner*, August 1880) two cases in which the initial lesion of syphilis was situated within the urethra. In the first case, that of a patient aged 50, a hard mass, suggestive of a portion of the stem of a clay-pipe, was felt in the substance of the glans penis. There was no induration of the prepuce nor of the superficial part of the glans, and the meatus was normal. A slight mucoid discharge was present, and there was multiple adenopathy in one groin and a single hard gland in the other. The endoscope showed thickening and infiltration in the fossa navicularis, and a linear abrasion of the mucous membrane three-quarters of an inch from the orifice. Mercury was given. Within five weeks, a macular syphilide appeared. In the second case, a general syphilitic eruption, mucous patches, enlarged glands, etc., were present when the patient came under observation. The mucous membrane of the glans was desquamating, but there was no appearance of initial lesion there. A mass of induration could be felt in the substance of the glans. On the roof of the urethra, about three-quarters of an inch down, the endoscope showed a slightly elevated granulation. This was considered by the author to be the initial lesion transformed into a secondary one. The author also cites other cases from various sources.

8. *Landowski on Vaccinal Syphilis.*—In a paper on this subject (*Journal de Thérapeutique*, Aug. 25, 1880), Dr. Paul Landowski goes over the old ground, but does not bring forward any new facts or cases. Vaccination from the calf is advocated. If lymph be taken from a child, he should not be less than four to six months old, and he, as well as both his parents, should be carefully examined. If the child have a nurse, she also should be inspected.

10. *Holm on the Temperature of Syphilitic Young Children.*—Dr. N. Holm of Copenhagen gives the results of his researches on this subject (*Hosp. Tidende*, 1880; and *Schmidt's Jahrbücher*, September 1880, p. 40). The number of children whose temperature was noted was twenty-three, seventeen of whom had inherited and six acquired syphilis. The ages of the seventeen children, of whom eight were males and nine females, ranged between nine days and four months; and of the six with acquired disease, between one year and a quarter and two years and a half. The temperature was taken in the rectum morning and evening daily. The following were the results of the observations. 1. *Inherited Syphilis.*—One child, fifteen days old, who had, on admission, a scaly rash and scattered ulcers of the skin, at first steadily lost weight. The temperature remained below normal whilst wasting was going on, but rose to the healthy standard as the weight increased. In another case the temperature was 97 deg. in the morning and 99 deg. in the evening. A third child had a similar low temperature. In a case, which ended fatally, the temperature was sometimes only 95 deg. Fahr. In all the seventeen children the temperature was habitually below normal, except when intercurrent febrile affections were present. 2. *Acquired Syphilis.*—In one case the temperature rose above 100 deg. Fahr. in the evening, but always fell to normal in the morning. In the remaining five children the temperature was normal.

11. *Zeissl on Excision of the Initial Syphilitic Sclerosis, and on the Treatment of Syphilis.*—In the *Wiener Med. Presse*, Nos. 27, 28, 29, 1880, Professor Zeissl opposes the view that the initial sclerosis is only a local symptom whence the general infection takes place; he believes the initial lesion to be the first expression of the general infection of the patient's system. The author also relates five cases of excision of indurated sores, in all of which general syphilis followed, notwithstanding the removal of the initial lesion. In the treatment of syphilis the author speaks favourably of Zittmann's decoction, but states that he has not found benefit from pilocarpine.

15. *Gibier on a Case of Syphilitic Chancre in an Unusual Situation.*—A man, aged 33, was admitted into the Hôpital du Midi, under the care of M. Horteloup (*L'Union Médicale*, 1880, No. 127), having at the time, below the fold of the right groin, a sore with an indurated base, which was considered to be the initial lesion of syphilis. Nothing is said respecting the genital organs at this time, but a week afterwards the furrow was the seat of erosive syphilides. There were also mucous patches of the anus, and ulcers between the toes, a general papular syphilide, and double inguinal adenopathy.

16. *Schirajew on Hard Chancre of the Tonsil.*—Dr. P. Schirajew of Moscow reports the following cases (*St. Petersburg Med. Wochenschrift*, 1880, No. 39). Case 1.—A married domestic servant, aged 28, was admitted into hospital after having been ill for two months. On examination, the genital organs were found to be quite healthy. There were roseolar rash on the skin, and commencing glandular enlargement. The velum and left tonsil were red and swollen, and the latter was covered with a greyish deposit. After a few days a well-marked papulo-macular exanthem appeared, and the tonsil was found to be the seat of a superficial ulcer, with a distinctly hard base. It was ascertained that a cook, the fellow-servant of the patient, was suffering from syphilis. Case 2.—A child, six months old, was infected with syphilis by its nurse. The child's

mother, who was suffering at the time from a follicular angina, though warned of the contagious character of her child's disease, developed after six weeks an indurated chancre on the left tonsil, which was soon followed by roseola.

17. *Ott on a Case of Galloping Syphilis.*—This case, which is reported by M. Ott, was under the care of M. Guibout in the Hôpital St. Louis (*L'Union Médicale*, Oct. 16th, 1880). A man, aged 25, had sores of the penis in Feb. 1880. In June, rupia appeared. He was admitted into the hospital in July. The treatment consisted in the administration of wine, quinine, raw meat, strychnia, and gentian, until the general condition improved. Afterwards, specifics were given. The patient recovered in about two months. The crusts of the rupial sores were not interfered with, but allowed to drop off.

18. *Labat on Congenital Syphilitic Pemphigus.*—The following case of pemphigus, in which the palms and soles escaped the eruption, is related by M. E. Labat (*Progrès Médical*, Oct. 23rd, 1880). A woman, who had been a prostitute three years, was admitted into the Maternité one month before the end of her third pregnancy. She had contracted syphilis during her first pregnancy, and had been treated in the St. Lazare Hospital. The first child was born dead without eruption. The second child was born dead at the eighth month, also without eruption. In this, her third pregnancy, the mother went her full time, and was delivered of a feeble female child, covered with pemphigus. The eruption was much more abundant on the front of the body than on the back, and was confluent on the belly, face, chest, and scalp. The bullæ had nearly all burst. The skin of the palms and soles was smooth and shiny, but quite free from pemphigus. There was no coryza. The child died in twelve hours. No visceral disease was discovered *post mortem*.

19. *Fox on the Diagnosis of Cutaneous Syphilis.*—Dr. G. H. Fox, in a clinical lecture on this subject, remarks (*New York Med. Journ.*, Oct. 1880, p. 382) that the patient's history, especially in the late forms of syphilitic disease of the skin, is of little use. Polymorphism is of little value in diagnosis, because it is seen also in acne, scabies, and often non-syphilitic affections. The colour of the eruption is one of the least important signs; but absence of pain and itching is a very important and valuable sign. It is never necessary to ask whether an eruption itches or not; the marks of scratching should be looked for. Much itching of a syphilide means the presence of pediculi as well.

22. *Fournier on the Simulation of Venereal Assaults on Young Children.*—In a paper lately read before the Academy of Medicine, Paris (*Bulletin de l'Acad. de Méd.*, No. 43, 1880), M. Fournier draws attention to certain false charges of assault on young female children, which are not unfrequently brought against innocent individuals by unscrupulous persons. Such charges are generally made for the purpose of extorting money, but sometimes also from motives of revenge. The following case is related. A girl, aged 8, was admitted under the care of M. Fournier, on account of injuries which were alleged to have been inflicted on her a few days before by a middle-aged gentleman of excellent character and good position. On examination of the child, violent inflammation of the vulva, with copious discharge of thick greenish matter and swelling of the labia and nymphæ, was found. There were also several enlarged and slightly painful glands in each groin. The hymen was entire. There was no fever, nor disturbance of the general health. The child recovered perfectly in a fortnight under treatment by rest in bed, baths, emollient lotions, etc. In this case, M. Fournier remarked from the first that all the symptoms were unusually severe; in fact, more severe than he had ever seen in any case of violation. This severity was the more remarkable since, according to the patient's own admission, she had only been left alone with the accused person for a few moments. His suspicions being thus aroused, M. Fournier closely questioned the child, and at length, by means of bribes of various kinds, succeeded in eliciting the confession that not only was the charge of assault altogether false, but that the inflammation of the genital organs had been caused by her mother, who had on three occasions rubbed the parts with a blacking-brush. Thus, in this instance, the very intensity of the symptoms aroused suspicion. Had the woman caused less irritation, her scheme would probably have succeeded; for there is no sign by which a vulvitis due to a criminal attempt can be satisfactorily distinguished from inflammation produced by violence of any other kind. In another case, mentioned by M. Fournier, vulvitis was produced by repeated friction of the genital organs with a rough and dirty cloth. Onanism, also, is of itself sufficient to excite in young children a degree of vulvar inflammation, in every respect similar to that caused by an assault. The author also cautions medical men to be on their guard in giving any decisive opinion as to the cause of discharge from the genital organs of young children. No certificate should ever be given, except when required by legal authority, and even then should only specify the lesions actually observed, without attempting to certify as to their cause.

23. *Tyson on a case of Syphilitic Enlarged Spleen in a Child.*—The child in this case (*Lancet*, October 23, 1880) was one of twins, and was born in May 1875; but was not seen by Mr. Tyson until he was two years old, May 26, 1877. At that time he was pasty-looking; and the spleen extended downwards for three inches and a half, reaching the crest of the ilium; in front it approached closely to the umbilicus. The liver was not enlarged. There was no albumen in the urine. One grain of mercury with chalk was given twice a day, and one grain of iodide of potassium with ten minims of syrup of iodide of iron three times a day. On August 1st, the spleen was decidedly smaller, and on October 20th it was only one inch below the margin of the ribs. In September 1878, the spleen could not be felt, and the child was in good health. The mother of this child, now 39 years old, has been married nineteen years, during which time she has had thirteen children. The third, fourth, and ninth were still-born. The fifth, at ten years old, became stone-deaf, and is so now. There are remains of old iritis, and the incisor teeth are notched. The child, whose history is given above, is the eleventh. The thirteenth child had, soon after birth, a well-marked rash on the buttocks. In July 1875, the mother had gummy disease of the soft palate and perforation of the septum nasi, and has since suffered from localised nocturnal headache, relieved by mercury.

25. *Bader on the Treatment of Gonorrhœal Ophthalmia.*—In a paper read at the last annual meeting of the British Medical Association (*British Medical Journal*, November 13, 1880), Mr. Bader recommends the following plan of treatment, which he has employed with success, both in adults and children suffering from gonorrhœal ophthalmia, as

well as in infants with purulent ophthalmia. An ointment containing one grain of red oxide of mercury, and one-fifth of a grain of sulphate of atropia to a drachm of vaseline having been prepared, the patient lies down, and if he be restless an anæsthetic may be given. The eye is first well cleansed with tepid water, and then the ointment is to be pushed freely beneath the upper and lower lids with a soft camel's hair brush, so as to cover the whole conjunctiva. The dressing is to be repeated daily at 9, 12, and 4 o'clock, until the eyelids open freely; afterwards, once a day till the discharge ceases. The ointment is to be applied by the medical attendant himself. If the disease be recognised at the onset, only a few days' treatment will be necessary. The sound eye is to be kept bound up with lint, thickly smeared with the ointment.

27. *Dowse on Syphilitic Ataxia and the Pre-ataxic Stage of Locomotor Ataxy.*—Dr. Dowse, in the first of a series of papers bearing the above title (*Medical Press and Circular*, November 24, 1880) remarks that, unless there be contrary proof of the most absolute and positive kind, irregularity of movements and disturbances of volition, either in the engenderment of ideas or in the performance of co-ordinate muscular acts, in a very large majority of cases, are due essentially to some syphilitic affection of the nervous centres. Every case of locomotor ataxy is curable, provided it be treated sufficiently early and energetically. Every case of locomotor ataxy, with very few exceptions, can be traced to a syphilitic origin, if due care be taken to enquire carefully into the patient's history. A prolonged first stage in locomotor ataxy is rather against than in favour of a syphilitic origin. Thus, out of twenty-three cases recorded by the author, seven existed almost stationary in the first stage, with ataxy, for a series of years varying from eight to fourteen; whereas, in the remaining sixteen cases, when there was a clear history of syphilis, troubles of the second, and even of the third stage, with ocular paralysis and vesical and gastric crises, came on in from two to five years.

ARTHUR COOPER.

DERMATOLOGY.

RECENT PAPERS.

1. UNNA, P. G.—On Vegetable Parasites. (*Vierteljahr. für Derm. und Syph.*, Heft 2, 3, 1880.)
2. CASPARY, J. — On Wandering Non-Malignant Patches of the Mucous Membrane of the Tongue. (*Ibid.*)
3. SCHWIMMER, ERNST.—On Multiple Keloid. (*Ibid.*)
4. BABESIU, VICTOR.—On the Histology of Keloid. (*Ibid.*)
5. SCHIFF, EDUARD.—On the Treatment of Lupus. (*Ibid.*)
6. ZEISSL, MAXIMILIAN.—A Case of Papillary Growth on Lupus Tissue as a Base. (*Ibid.*)
7. SCHMIEDICKE, OTTO.—On Rhinoscleroma. (*Ibid.*)
8. VAN GENSER.—On the Employment of Salicylic Ointment in Eczema and other Skin Diseases of Children. (*Cent. Zeit. für Kinderheil.*, 1879.)
9. ESENBECK.—On Bromide Eruption. (*Der Prakt. Arzt.*, No. 6, 1880.)
10. KÜHN. — On Erythema Exsudativum. (*Berl. Klin. Wochen.*, Nos. 4, 5, 1880.)
11. BAEGEHOLD.—A Case of Ichthyosis Corneæ. (Virchow's *Arch.*, vol. lxxix, p. 545.)
12. JARISCH.—The Action of Pyrogallic Acid. (*Zeit. für Klin. Med.*, vol. i, 1879.)
13. MICHELSON.—Critical Remarks on the Etiology of Area Celsi. (Virchow's *Arch.*, vol. lxxx, 1880.)
14. VIDAL.—Alopecia Areata. (*Gaz. des Hôp.*, No. 59, 1879.)
15. VAN HARLINGEN, A. — Medicinal Eruptions. (*Arch. of Derm.*, Oct. 1880.)
16. DA SILVA LIMA, J. F.—On Ainhum. (*Ibid.*)
17. FORLANINI, C.— Studies on the Pathological Anatomy and Nature of the Kerion Celsi. (*Giorn. Ital. delle Malattie Veneree e della Pelle*, 1880, p. 23.)
18. SMITH, WALTER G. — On Recurrent Vesicular Disease of the Hands, *i.e.*, on the Skin-Affection described as Cheiro-pompholyx (Hutchinson), Dysidrosis (Tilbury Fox), Pompholyx (A. Robinson). (*Dub. Jour. of Med. Science*, Nov. 1880.)
19. CHANDELUX, M.—On Nerve-Lesions in Zoster. (*Arch. de Physiol.—Lyon Méd.*, 18 Ap. 1880.)
20. TSCHIRJEW.—On Nerve-Lesions in a case of Anæsthetic Leprosy. (*Arch. de Physiol.*, 1879, p. 614.)
21. ANGELLUCCI, A.—On the Etiology of Molluscum Contagiosum. (*Centrl. für die Med. Wissen.*, No. 3, 1881.)
22. JARISCH, A.—On the Coincidence of Diseases of the Skin and of the Grey Matter of the Spinal Cord. (*Sitzungsb. der K. Akad. der Wissench.*, vol. lxxxi, p. 159.)
23. SANGSTER, A.—A Contribution to the Non-Glandular Theory of Molluscum Contagiosum. (*Medico-Chir. Trans.*, vol. lxiii.)
24. MORRIS, H.—On two Cases of Carcinoma of the Breast, preceded by so-called Eczema of the Nipple and Areola. (*Ibid.*)
25. MORRIS, H.—On a Case of Epithelioma of the Neck following a Patch of Chronic Skin-Disease. (*Ibid.*)
26. DUCKWORTH, DYCE.—A Case of Scleroderma Adultorum, illustrating the Circumscribed and the Diffuse Forms of the Malady. (*Trans. of the Path. Soc. of Lon.*, vol. xxxi.)
27. LEGG, J. WICKHAM. — Xanthelasma Multiplex: Disappearance of the Patches. (*Ibid.*)
28. HUTCHINSON, JONATHAN.—On a Peculiar Papulo-Vesicular Eruption (Lupus Lymphaticus). (*Ibid.*)
29. BARKER, A. E. J.—On a Peculiar Circular Wandering Rash on the Tongue. (*Ibid.*)

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1. *Unna on Vegetable Parasites.*—Unna (*Vierteljahr. für Derm. und Syph.*, Heft 2, 3, 1880) ascertained, by examining sections of skin affected with favus, that the parasite is not found in the deeper living layers of the epidermis, but is limited to the horny cells. It passes from them to the internal root sheath of the hair, thence to the cuticula, and finally penetrates the shaft. The external root-sheath and the hair-bulb remain unaffected. Inflammatory cell-exudation is found around the superficial blood-vessels, and obstruction in the sweat-ducts and hair-follicles leads to the formation of cysts. [It is interesting to note that the fungus of favus, in being able to live only in the horny substances of the epidermis, is subject to the same law as the trichophyton tonsurans.—*Rep.*] Unna recommends the use of boracic acid and vinegar lotions in parasitic skin diseases.

2. *Caspary on Wandering Non-Malignant Patches of the Mucous Membrane of the Tongue.*—The author (*Vierteljahr. für Derm. und Syph.*, Heft 2, 3, 1880) describes an affection of the tongue which he has repeatedly observed, and which consists in patches, which appear both on its upper and under surfaces. They change their position from day to day, are circular and gyrating in form, are red in the centre, and have a well-defined yellowish border. A palpable infiltration could not be detected. They are not syphilitic. The cases described occurred in children and adolescents.

4. *Babesiu on the Histology of Keloid.*—The observations (*Vierteljahr. für Derm. und Syph.*, Heft 2, 3, 1880) were made on tumours excised from a case of multiple keloid under the care of Professor

Schwimmer. The author concludes that it is not always possible to distinguish by the histological appearances idiopathic keloid from a cicatricial keloid. The keloid tissue resembles cicatricial tissue. After having become organised up to a certain point, it remains without further development, and is more or less definitely separated from the surrounding parts.

5. *Schiff on the Treatment of Lupus.*—The author (*Vierteljahr. für Derm. und Syph.*, Heft 2, 3, 1880) reports five cases treated by the method recommended by Auspitz, in illustration of the successful results obtained in the Poliklinik at Vienna. The method consists in combining the use of the Volkmann's spoon with injections into the lupus nodules of a few drops of a solution of one part of iodine in twenty of glycerine.

7. *Schmiedicke on Rhinoscleroma.*—The author (*Vierteljahr. für Derm. und Syph.*, Heft 2, 3, 1880) reports a case of this rare disease, which was under the care of Oscar Simon, of Breslau: with the exception of a case observed in Italy, the only one not recorded by the Vienna School. The treatment by ointment of pyrogallic acid (1 : 9 vaseline) appears to have been more efficacious than the treatment hitherto tried in Vienna.

8. *Von Genser on the Treatment of Skin-Diseases in Children by Salicylic Ointment.*—The author (*Centralz. für Kinderheil.*, 1879) found the following ointment very useful in the moist eczema of children. One part of salicylic acid is dissolved in a little rectified spirit, and made into an ointment with twenty-five parts of lard. The same ointment was found useful in eczema of the nipple in suckling women.

9. *Esenbeck on Bromide-eruption.* — A single woman, aged 26, had taken (*Der Prakt. Arzt.*, No. 6, 1880) large doses of bromide of potassium for two years as a remedy for epilepsy. For a year the fits had disappeared, but the patient became excessively weak and anæmic, with exaggerated leukæmia, and the subject of a skin-affection. On both thighs, the mons veneris, the whole hypogastrium, and on both breasts, the skin was moist, abraded, and covered with warty growths, crusts, and scabs. Recovery from all these symptoms followed after three or four weeks when the bromide was given up, but the epilepsy returned.

11. *Boegehold on a Case of Ichthyosis Cornecæ.*—A boy, aged 9 years (Virchow's *Arch.*, vol. lxxix, p. 545), who at the age of three months had begun to develop on the soles and palms warty-looking structures, was found to have on both these situations spike-shaped projections from 1 to 1½ centimètres (0.4 to 0.6 inch) long. The rest of the body was free, except on the knees, where the growth had also developed, although to a slighter extent. Microscopical examination showed hypertrophied papillæ and a changed condition of the epidermis. There were only two rows of nucleated epithelial cells immediately over the papillæ, all the rest of the epidermis being composed of flattened polygonal cells in which no nucleus was visible.

12. *Jarisch on the Action of Pyrogallic Acid.*—The author (*Zeitsch. für Klin. Med.*, vol. i, 1879), in reference to a fatal case reported by Neisser, in which death followed the extensive use of pyrogallic acid ointment, argues that in this case the unfortunate result was due to want of caution in using the remedy. Further experience justifies him in believing that there is no danger attending its use, if ordinary care be taken. A 10 per cent. ointment had proved itself in his hands an excellent remedy for eczema marginatum. Where a strong ointment is not required, he recommends a 5 per cent. ointment; and, for all cases, that the remedy be not used in greater strength than is necessary.

14. *Vidal on Alopecia Areata.*—The author (*Gaz. des Hôp.*, No. 59, 1879) recommends frequent shaving of the affected part, with blistering.

16. *Da Silva Lima on Ainhum.*—The author's matured views on this disease of the negro race in Brazil is summarised in the following definition. 'Ainhum is a disease peculiar to the African race, characterised by a slow, progressive, fatty degeneration, generally with considerable increase in volume of the toes, especially of the smallest, involving almost all their anatomical elements, resulting from a nearly linear strangulation, which last is occasioned by the presence of a narrow strip of contracted and hardened skin, which embraces at first a part, and afterwards the whole, of the circumference of the toe, on a level with the digito-plantar fold. This constriction, after the lapse of from four to ten years, forms a deep circular furrow, which determines the absorption of the phalanges and the obliteration of the vessels, with the final and inevitable dropping off of the toe, either as the result of accidental injury or gangrene.'

17. *Forlanini on the Pathological Anatomy and Nature of the Kerion Celsi.*—The author (*Giorn. Ital. delle Malattie Veneree della e Pelle*, p. 23, 1880), struck by the rarity with which he could find the trichophyton tonsurans in the hairs in kerion, prepared sections of a portion of affected skin. In 200 sections, in which more than 800 transverse sections of hairs were visible, only one hair was found to contain the parasite. He is thus led to question that the presence of the parasite in the disease is more than accidental.

18. *Smith on Recurrent Vesicular Disease of the Hands.*—Dr. Walter G. Smith contributes (*Dub. Journ. of Med. Science*, Nov. 1880) three cases of this disease (dysidrosis, cheiro-pompholyx, pompholyx). In one (an adult man) the affection recurred nearly every summer—the first attack having come on when he was 16 years old. The patient, a physician, gives a graphic account of his own case. In describing an attack which occurred last year, he states, that on July 23rd, he experienced a feeling of itchiness between the middle and ring-fingers of the left hand. The sensation was felt soon between other fingers, and also on the right hand. During the first day there was nothing to be seen. On the second day, with increased sensations of itchiness and tingling, there was a distinct mottling visible between the fingers and on the palms of the hands. On the third day, a few deeply seated spots were to be seen in the skin between the fingers. Plunging the hands in cold water was the only thing that gave relief, but on taking them out the tingling returned with all its severity. On the fourth day, the eruption was pretty well out, there being, between and on the dorsal surface of the fingers, small elevations like minute sago-grains, dark in the centre, and with clear periphery, and distinctly raised. A few were to be seen also on the palms of the hands: these were deeply set in the skin and not raised. [The eruption then followed the usual course.—*Rep.*] The patient had found the attacks to be favoured by hot weather and checked by cold, and on all the occasions on which the attack was severe he had been taking a considerable amount of exercise, causing heat of skin and sweating. Arsenic

did not appear to have much influence over the disease. In two other cases, in women, there was a coincidence of the development of the peculiar vesicular eruption with the catamenial period.

19. *Chandelux on Nerve-Lesions in Zoster.*—Another case is put on record (*Lyon Méd.*, 18th April 1880) in which lesions were found in the inter-vertebral ganglia, corresponding to the parts attacked by the eruption. The sympathetic and its ganglia showed no changes.

20 *Tschirjew on Nerve Lesions in a Case of Anæsthetic Leprosy.*—The author (*Arch. de Physiol.*, 1879, p. 614) reports a case of anæsthetic leprosy in which the ganglion cells of the posterior horns were deficient in number, atrophied, and at some parts wanting altogether. In the anterior horns the ganglion cells were apparently normal.

21. *Angelucci on the Etiology of Molluscum Contagiosum.*—The author (*Central. für die Med. Wissen.*, No. 3, 1881) believes that he has succeeded in demonstrating that a micro-organism is concerned in the production of molluscum contagiosum. In sections stained with methyl-violet gentiana or hæmatoxylin, large numbers of small darkly stained bodies are found surrounding the molluscum corpuscles. Whilst the epithelial cells which are in immediate contact with the 'corpuscles' contain these minute bodies, the more distant cells, which are in contact with the connective tissue, are free from them. As the bodies not only stain characteristically, but resist caustic potash, ammonia, and acetic acid, the author does not hesitate to consider them as organisms; and, as they are found amongst the epithelial cells in the earliest stages of the affection of the epidermis, he attributes to their action an essential part in the development of the tumour.

22. *Jarisch on the Coincidence of Diseases of the Skin and of the Grey Matter of the Spinal Cord.*—A woman, aged 61 (*Sitzungsb. der K. Akad. der Wissensch.*, vol. lxxxi, p. 159), had been liable to bullous eruptions on the upper parts of the body for five years, and had been for the same time in delicate health. An acute attack of a skin-affection, with febrile symptoms, suddenly developed itself over the upper half of the body—the head, face, arms, and upper part of the trunk being covered with nodules, pustules, and shrivelled bullæ of large size. The epidermis was raised from the soles of both feet, in the form of a bladder, by hæmorrhagic exudation. The mucous membrane of the tongue was dry; the rest of the mucous membrane of the mouth was swollen, red, and excoriated. On the soft palate there were sharply demarcated, excoriated, yellowish-red spots. The affection of the skin ended at the level of the tenth dorsal vertebra behind, the lower boundary passing forwards with a depressed curve to the umbilicus. Acute bed-sores developed, and the patient died, the *post mortem* examination showing Bright's disease in its third stage, and lobular pneumonia. An examination of the spinal cord showed changes in the ganglion-cells in the anterior horns, and in the grey substance from the third cervical to the eighth dorsal vertebra.

23. *Sangster on Molluscum Contagiosum.*—Dr. Sangster (*Medico-Chir. Trans.*, vol. lxiii) concurs with the pathologists who believe that molluscum contagiosum is a disease of the epidermis, the changes belonging essentially to the granular and corneous layers.

24. *Morris on so-called Eczema of the Nipple and Carcinoma of the Breast.*—In both of Mr. Morris's cases the eruption (*Medico-Chir. Trans.*, vol. lxiii) extended beyond the areola, and in both it passed into a somewhat deeper ulceration of the skin. In one of the cases the eruption had commenced nearly six years, and in the other between four and five years before cancer was suspected. [The coloured plate attached to Mr. Morris's paper is worthy of study.—*Rep.*]

26. *Morris on Epithelioma of the Neck following Skin-Disease.*—The patient (*Medico-Chir. Trans.*, vol. lxiii), a woman, aged 60, had a small circular red and scaly patch about the size of a sixpence on the right side of the neck, which remained in much the same condition for about five years, shedding fine light scales. After being subjected to fresh and increased irritation, first by a blow, and afterwards by frequent cauterisation, a sore formed, limited to the spot previously affected with the skin disease, and from this it spread wider and deeper, at first slowly and afterwards more rapidly. It exhibited the characteristic appearances of epithelial cancer.

27. *Legg on a Case of Xanthelasma Multiplex, in which the Patches Disappeared.*—The patient (*Trans. of the Path. Soc. of London*, vol. xxxi) was an adult man, in whom the xanthelasma (multiplex) developed in association with jaundice. There were patches on the inner aspect of both eyelids, on the nates, middle line of sacrum, elbows, back of right hand, flexures of both palms and fingers, base of penis, and perinæum, and on the left sole, where the great toe joins the foot. All the patches, with the exception of those on the lids, disappeared, and these became smaller. Dr. Wickham Legg can only find one well authenticated case in which the patches of xanthelasma became smaller.

28. *Hutchinson on a Peculiar Papulo-Vesicular Eruption.*—One patient, a boy, aged 10 (*Trans. of the Path. Soc. of London*, vol. xxxi), had the eruption on his chin. It began a year before he came under observation as a little wart. The chin is described as being occupied by a patch, as large as a penny, and made up of coalesced clusters of small papules. Many of the papules were translucent, and contained clear fluid. The other case was that of a boy, aged 7, on whom the eruption was observed on the left shoulder where the braces rubbed him. It had been present three or four years. During two years there had been little change in its appearance. Dr. Sangster's report on the microscopical appearances points out that these were collections of fluid in the substance of the true skin. In many of the hair follicles of the affected part two or more acari were found. [No lupus cell-growth or lupous destruction of connective tissue is reported.—*Rep.*]

29. *Barker on a Peculiar Circular Wandering Rash of the Tongue.*—Mr. Barker describes two cases (*Trans. of the Path. Soc. of London*, vol. xxxi) of a wandering rash on the tongue in children, the descriptions corresponding in every respect with those given by Caspary (see above, No. 2). Mr. Barker remarks that the bands of eruption are in almost every case either circular, or form parts of circles. They start from a single spot, of a slightly paler hue than the rest of the epithelium of the tongue. This rapidly developes into either a small ring or a crescentic band, almost forming a circle in many cases, but open at one side or other. These rings or crescents appear in every part of the dorsum of the tongue with equal frequency, but occasionally creep over its borders or tip for some distance. They were never found on the floor or other parts of the cavity of the mouth. From their commencement they travel with varying degrees of rapidity, some-

times remaining stationary for a considerable time, but usually advancing very quickly, a small circle developing into a wide ring in the course of a few hours. Within the concave margin the surface appears somewhat livid, but not inflamed; it is simply smooth and glazed, as though denuded of its epithelium. The bands of eruption themselves are not of the same colour as the normal tongue, but a little lighter, and have a chafed, roughened surface, somewhat raised and sharply marked at the border of advance. The eruption was attended with great itching. Mr. Barker refers to an article on the same subject in the *Rev. Mens. de Méd. et de Chir.*, Jan. 10, 1880, entitled 'Lichénoide Lingual'.

G. Thin, M.D.

REVIEWS.

On Aneurism: especially of the Thorax and Root of the Neck. By Richard Barwell, F.R.C.S., London: Macmillan and Co. 1880.

This addition to the literature of surgical aneurism may certainly be regarded as one of some importance. The author has had extensive experience of the operative treatment of large aneurismal tumours connected with the aorta or one or more of the main arteries of the neck, and has evidently devoted much time and pains to their clinical study. The contents of the volume consist of a description of a new form of ligature recently introduced by the author; of two short chapters on aneurisms in the limbs and on the upper part of the carotid artery; and of a long and interesting discussion on aneurisms at the root of the neck and of the aortic arch, with regard mainly to their differential diagnosis, and to their treatment by surgical means. The work is essentially a practical one, and seems to be based to a very great extent on the author's own researches and clinical experience. Of this experience, the best use has here been made; but we are disposed to hold that the utility of Mr. Barwell's book would have been much enhanced by the addition of a carefully prepared table of all the cases that have hitherto been recorded, of operation for aortic and aorto-innominate aneurism.

In the opening chapter, which is descriptive of the flat ligature, it is pointed out that the ordinary silken ligature constitutes a foreign and putrescent body, and that catgut is unreliable for the deligation of vessels in their continuity. Different specimens of this latter material, and even different parts of the same cord, may vary in consistence and in mode of action when applied to vessels. Mr. Barwell believes that, in these days of antiseptic surgery and soluble ligatures, it is an error to insist on the effusion of coagulable lymph, and on the necessity of an internal arterial wound to induce coagulation of the blood. The division of one or more of the arterial coats exposes the patient to the dangers of secondary hæmorrhage; and to avoid this division, and at the same time to stop the blood-current with certainty, is, with a *round* ligature of any material, a matter of great difficulty. The only reliable form of ligature, it is stated, which when tied firmly round an artery will not divide any of its coats, is a flat band; and the best material for such a tape-like ligature, which should not dissolve too quickly, or set up any irritation, is, so far as has been hitherto proved, the middle coat of the aorta of oxen, in a perfectly fresh condition. This material, when carbolised and deprived of its elasticity, forms a ribbon ligature which, when tied round an artery, leaves it entire, and does not divide any of its coats. Seven cases are mentioned in which this ligature was applied with good results to a large artery—to the carotid, subclavian, and femoral, in two cases of each vessel, and to the external iliac in one case. The value of the flat ligature has yet to be determined; and even in the practice of Mr. Barwell it cannot at present claim any advantage over the round catgut ligature, since in his three successful cases of double distal ligature for innominate aneurism the latter agent was used. It is to be regretted that in this country the question must necessarily be settled by clinical investigation alone. Mr. Barwell seems disposed to regard his ligature as an organisable one, but evidence is certainly wanting as to the behaviour of such an agent in contact with a large vessel, and inserted far beyond the surface of the body.

The larger portion of this work is devoted to the subject of innominate and aortic aneurism. Here we find an interesting record of all the cases of distal ligature of the carotid and subclavian arteries, in the practice of Mr. Barwell, that have from time to time been recorded in the *Transactions of the Royal Medical and Chirurgical Society*. The author's application of Wardrop's operation to the treatment of large aneurism at or near the root of the neck has, as is well known, been attended with remarkable success, the only three successful cases out of the eleven cases of the kind that have hitherto been published having occurred under the care of this surgeon. We use here the term 'aneurism at or near the root of the neck' where Mr. Barwell speaks of 'innominate aneurism'; for we find that, though careful to make a distinction in the sections of his book between aneurism of the innominate and its large branches on the one hand, and that on the other, in which the aorta participates, he has failed to maintain such distinction in the arrangement of his cases. In one of the three successful cases of double ligature applied by Mr. Barwell for the treatment of what is here called 'innominate aneurism', that of a man who died from bronchitis fourteen weeks after the date of operation, the aneurism, it was found, sprang from the aorta. The second case, in which also an opportunity was afforded of observing the good results of deligation, is recorded in the chapter on aneurisms of the aortic arch, and was one of aneurism springing from the anterior aspect of the ascending aorta, and from the root of the innominate. The subject of the third case was living in November last.

In the last, and probably the most interesting, portion of Mr. Barwell's book we find a discussion as to the benefits which may accrue from deligation of one or more of the large vessels of the neck in carefully selected cases of thoracic aortic aneurism. Reference having been made to cases in which the left carotid had been tied by Mr. Christopher Heath and Mr. Holmes for aortic aneurism, in accordance with a suggestion made by Dr. Cockle in 1869, Mr. Barwell gives his reasons at full length for having resorted, in his own practice, to distal ligature of the right carotid and subclavian arteries in two cases of intrathoracic aneurism. He endeavours to prove, by anatomical and pathological facts, that there is in the ascending portion of the healthy aorta a double blood-stream—a stronger one, directed from the outer portion of the aortic tendinous ring to the orifice of the left carotid, and a slower one to the right of this.

Arguing from the conclusion that, if this be so, the force of the rapid stream must, in case of occlusion of the left carotid, be directed to the right, it is held that, if aortic aneurisms are to be treated by deligation, distinction should be made between those springing from the right and the left portions of the arch.

The theory of the double aortic current has been severely criticised, and may be regarded as still open to serious objection. As to the beneficial results of distal ligature, whether in the right or left side of the neck, in cases of advanced aortic aneurism, there cannot, we think, be any doubt; and such advance we owe in great part to the practice and teaching of the author of this able contribution to surgical literature.

W. JOHNSON SMITH.

De la Section des Nerfs Ciliaires et du Nerf Optique. Par Dr. PAUL REDARD. Paris: Baillière et Fils. 1879.

THIS is a very complete and exhaustive monograph upon the subject of optico-ciliary neurotomy. The author, in the opening sentence of the introduction, formulates the opinion that this operation has a great future before it. This is the key-note which he strikes throughout. He writes rather as an advocate or special pleader than as a judge. He marshals his facts and deduces his conclusions as if already certain of a favourable verdict. This fact must not be lost sight of while reading his work. The book commences with a historical review of the position of the operation from the date of its first proposal by Graefe, in 1866, to that of its general acceptance as a legitimate procedure, thanks to the labours of Schoeler (1878), Abadie (1879), and Meyer (1879). The second chapter contains a good account of the anatomy of the ciliary nerves, with the results of the author's own researches on the ultimate endings of some of the finer filaments. The third chapter gives in detail the results of a large number of physiological experiments upon animals, undertaken to show that nervous lesions do not necessarily or even generally cause trophic changes in the eyeball. The fourth chapter is devoted exclusively to a consideration of the part played by the ciliary region in certain ocular affections. The fifth and succeeding chapters contain a large number of cases in which section of the ciliary nerves, or of the ciliary and optic nerves, was performed, with the results obtained, and the practical conclusions which the author thinks capable of being deduced therefrom.

These conclusions are stated by the author with candour and clearness, and naturally form one of the most interesting portions of his work. Speaking generally, he would substitute neurotomy for enucleation in all cases where the former operation could be considered as a therapeutic procedure, as, for instance, in cases of obstinate ciliary neuralgia, and large staphylomata with persistently high tension. He quotes, in support of this statement, a case of Schoeler's, in which section of the nerves caused partial atrophy of a large staphyloma, and reduced the globe sufficiently to allow an artificial eye to be worn. As regards the value of optico-ciliary neurotomy in sympathetic ophthalmia, the author considers that enucleation in such cases is necessarily either preventive or therapeutic. In the latter case, it is performed when sympathetic ophthalmia has already invaded the second eye. Here he thinks it would not be safe to substitute a comparatively untried operation for one of known efficacy. Consequently, while waiting for further data, he would in all these cases continue to enucleate. But there are a large number of cases in which enucleation of an injured eye is performed in order to prevent, as far as may be, the subsequent development of sympathetic troubles. It is just in these cases that he finds a hopeful future for neurotomy. He considers it in such cases as superior to enucleation; first of all, because it is equally efficacious, and secondly, because it is a less severe and more conservative procedure.

In these conclusions we can by no means agree. The whole question at issue is whether optico-ciliary neurotomy is really equally efficacious with enucleation, and whether or not it is a more dangerous procedure. As regards its efficacy, ophthalmologists are by this time pretty well agreed. It cannot be relied upon with anything like the certainty of enucleation. As regards its actual dangers, while these may by care and manual dexterity be reduced considerably, they must nevertheless always be more or less present. Some of these dangers are very formidable—to wit, necrosis of the cornea, phlegmonous inflammation of the globe, paresis of the ocular movements, strabismus, hæmorrhage, atrophy of the globe, and gangrene of the contents of the orbit. The mere possibility of the occurrence of any one of these would go far to remove the operation out of the category of harmless and safe procedures. But the most fatal objection to neurotomy, perhaps of all, is the one on which the author touches most lightly, and that is, that the operation frequently fails in its results. The nerves re-unite, or, at least, sensibility and innervation return to the cornea and ciliary region at certain points, and to all appearance the eye is in as dangerous a condition as it was before the operation. Some cases recently published by Knapp place this fact in a very clear light, cases with which the author at the time of writing was apparently not acquainted.

On the whole, Dr. Redard's work will probably fulfil the purpose with which it was written, viz., to place before the reader the chief arguments in favour of neurotomy as a substitute for enucleation. In the performance of his self-imposed task, he has evidently spared neither trouble nor research, and many of his experiments and cases are well worthy of careful consideration. Although we do not think that he has succeeded in establishing the superiority of neurotomy over enucleation, save in the solitary case where a patient obstinately refuses to submit to the latter; his book is by no means without value. It is a well-written and erudite monograph on a confessedly difficult subject, and is certainly worth the attention of opthalmologists.

LITTON FORBES, M.D.

Hygiene and Treatment of Catarrh. Part I. By Thos. F. Rumbold, M.D. St. Louis: Geo. O. Rumbold and Co.

DR. RUMBOLD states in his preface that he has made this subject a constant study for twenty years, and he has embodied the results of his experience in the book under review. It is divided into two sections, one relating to the hygienic measures which the author has found necessary to secure for his patients a safe passage through adverse seasons; the second division refers to the 'sanative' proceedings he advises to cure a cold, in other words, the therapeutics of catarrh. Unfortunately, this division is not maintained, some chapters pertaining to the one

being thrown in promiscuously with the other. In the section on hygiene are [many homely but useful hints on a great variety of subjects. Thus, catarrhal persons are instructed to wear night-caps, to guard against the use of fur wraps and tight collars for the neck, etc. Chapter vi treats of cold feet. For fœtor arising from these members, salicylic acid, five grains; hydrate of chloral, ten grains; vaseline, one ounce; should be rubbed in after hot bathing. Catarrhal females are advised to clothe themselves in entire suits of stocking-knit material, an additional suit being added as the weather becomes colder, until as many as four such suits, one over the other, have been adopted. Respecting these habiliments, we read (Chapter v) the novel announcement that 'those patients who are thin in flesh should not change the stocking-knit material that is next the body for one, two, three, or more weeks, as the dry skin does not soil the clothing so rapidly as does the healthy oily skin'. After the foregoing instruction, it appears superfluous to be further informed that, speaking generally, 'the suit next the skin should be worn at night as well as during the day'. The eccentricity of the author's views on personal cleanliness are still more pronounced in the chapter on 'bathing'. Here we read that 'delicate patients should not perform the act of ablution oftener than once in one or two weeks in warm weather, and once in four to eight weeks in cold weather, or it may not be required at all in cold weather'! The irritability of catarrhal subjects is referred to congestion of the sinuses 'situated immediately under the mental (*sic*) portion of the brain', and such persons are cautioned to curb their anger, as its indulgence promotes cerebral congestion. There is an elaborate counterblast to the use of tobacco, the cogency of which is diminished by the absence of physiological elucidation. The inunction of vaseline is highly commended, and directions are given for its efficient performance.

Under the head of 'Sanative Measures', very practical instructions are adduced for washing the nasal and postnasal cavities: the insufficiency of the nasal douche to remove incrustations is proved, a conclusion which the reviewer's experience enables him to endorse. It is shown to be injurious in many subjects, and a substitute for it is figured and described. This chapter, which is of real value, is in many places almost unintelligible, owing to the numerous typographical errors with which it abounds, one paragraph having neither beginning nor end. Of similar practical utility are the remarks on cleansing the middle ear, when a perforation of the drumhead exists. The association of diseased teeth with the maintenance of chronic catarrh, both nasal and aural, receives copious illustration by the details of cases replete with instruction. The work concludes with a much-needed caution against allowing colds to cure themselves.

The perusal of Dr. Rumbold's book, notwithstanding the rich vein of experience it contains, leaves upon the reader a sense of something lacking, irrespective of the unpardonable carelessness with which it has been issued from the press. Probably this is due to the scientific knowledge of the author not being equal to his practical acquirements. It suggests that a busy, observant, shrewd, and eccentric practitioner has pitched the results of his experience to the world without taking the pains to set his pearls in even a decent mounting. It is because of the great value of much that he has written that we would suggest to him, in view of Part ii, that what is worth doing in the way of recording such an experience, is worth doing a great deal better than in the book before us. E. Woakes, M.D.

Des Amputations et des Resections chez les Phthisiques. Par Charles Leroux, Docteur en Médecine de la Faculté de Paris. Paris: J. R. Baillière et Fils. 1880.

This *brochure* gives the results of investigations made by the author, at the instigation of M. Verneuil, in order to determine generally the results of certain operations on phthisical and scrofulous subjects, and to establish indications, or counter-indications, with regard to surgical intervention under such circumstances. Dr. Leroux's general conclusions are based on an analysis of ninety-nine collected cases of amputation or resection performed on patients affected with phthisis. In nearly every one of these cases the operation had been performed for the removal either of carious or necrosed bone or of a diseased joint. No instance has been met with by the author of operation in a phthisical subject for recent injury. It is pointed out that with the subjects of phthisis and scrofula amputation for disease is less fatal than resection. The former operation, when fatal, causes death speedily, whilst resection kills slowly, though surely. After such operations on such subjects, traumatic fever, it is stated, is rarely very intense, and erysipelas and lymphangitis seldom occur. The healing process, however, is very tardy and imperfect, and after resection of a joint complete cicatrisation is scarcely ever observed. The conclusion of Dr. Leroux, as to the advisability of refraining from surgical interference in cases of chronic disease of the bones and joints in phthisical patients, agrees with that of every experienced surgeon. The only indication for one or the other operation in such cases, it is held, should be very severe and persistent pain. Dr. Leroux advocates the plan of treating such cases, without operation, in special hospitals for scrofula, favourably situated and established under the most favourable hygienic conditions. Much labour has evidently been devoted to this important subject, and the author seems to have investigated with care all points connected with it, save the important one of the influence of Listerism and the antiseptic method on the results of operative surgery practised under such bad conditions. W. Johnson Smith.

Materia Medica and Pharmacy for the Use of Medical and Pharmaceutical Students Preparing for Examination. By W. Handsel Griffiths, Ph.D., and George T. Duffey, M.D. Dublin: Fannin. London: Baillière and Co. 1879. Pp. 300.

Not the least advantage of a British pharmacopœia is the possible interchange of text-books between the great schools. We owe to Edinburgh the excellent *Note-Book* of Scoresby-Jackson, and to Dublin the capital *Commentary* of W. G. Smith. In the notice of Sayre's *Conspectus* (London Medical Record, Nov. 15, 1880), the *Commentary* should have been mentioned when the need of a good chemical manual was expressed, and attention should have been called to the smaller, but good volume, titled as above. Dr. W. H. Griffiths was certainly one of the good workers of the Dublin school, and, had his life been spared, would have taken a front rank in his own branch. This treatise—left half finished by his untimely death—has been edited and completed by

Dr. Duffey, and differs from most other kindred works in the comparative exclusion of therapeutics, the special methods of grouping, and the very frequent use of synoptical tables. Under each officinal drug comes, first, a table of its preparations, formulæ, strength, dose, and use; then, in detail, but concisely, the separate compounds, with chemical explanations clearly put and sufficiently full. Iron, mercury, opium, and other rather long sections, we find brought within short but lucid limits. Vegetable drugs are tabulated under their natural orders, so that, *e.g.*, the relation between aconite and podophyllin is evident; the Cinchonas are well put; Solanaceæ and Atropaceæ are distinguished.

In the second part, the requirements for examination are well met by tables of decoctions, infusions, plaisters, etc. If anything, there is an excess of subdivision. The alkaloids are specially treated, and the explanation of tests is good. The book says nothing about non-officinal remedies, but is a chemical companion to the *Pharmacopœia*, which may be depended on, and is exceedingly well adapted for students. Edward Mackey, M.D.

Lectures on Diseases and Injuries of the Ear. By W. B. Dalby, F.R.C.S., M.B. Second edition. London: J. and A. Churchill.

After an interval of seven years, Mr. Dalby presents a second edition of his lectures. These cover most of the field over which aural practice extends. The subjects in the main are lightly dealt with; as he is addressing students, his teaching is appropriately introductory and elementary; the style also is clear and concise, as befits a work of this character. It is to be regretted that this desire for brevity frequently leads the author to sacrifice details of the highest importance. Thus it happens that, just as the reader has mastered the preliminary remarks on a particular subject, and is looking for full and detailed instruction upon it, there occurs a sudden break off, and a totally diverse topic is introduced. While many of the chapters are good, notably that on aural polypus, the practical value of which is augmented by the microscopical drawings and explanatory comments of Dr. Whipham—the defect just alluded to occurs so frequently as to create a feeling of disappointment in the mind of any but the tyro in otology. An instance of this occurs when the value of Eustachian catheterisation is dealt with, the observations respecting which prepare us to expect that at last some definite results of auscultating the ear are about to follow, when the subject runs off into non-purulent catarrh of the tympanum. Here, again, a similar disappointment awaits us. We have reached the crux of the aurist; but, in the few pages devoted to its consideration, there is little to console the specialist beyond the information that in these cases, where opportunity has been afforded of examining the ears after death, the deafness 'either slight or extreme, has been amply accounted for by morbid conditions behind the membrane'. We might multiply such instances, but prefer rather to point out the merit of the book, which is, that it affords the student an intelligent survey of the subject of otology. E. Woakes, M.D.

First Series of Therapeutics. By Alexander Harvey, M.A., M.D., Emeritus Professor of Materia Medica in the University of Aberdeen. Pp. 278. London: H. K. Lewis. 1879.

This can hardly be considered a work on Therapeutics—at all events, in the sense in which we ordinarily employ the term. It consists of a series of lectures 'on the modes and processes of healing and recovery as occurring spontaneously in disease', and on 'the modes and processes of dying, as resulting naturally from disease'. The author attaches particular importance to a practical acquaintance with these subjects, and regrets the virtual neglect of all instruction in them in the courses delivered at our medical schools. He fears that by some he will be regarded as a therapeutic Nihilist, and avers that he is not open to this charge. He appears to be much dissatisfied with our present system of therapeutics; but we venture to think that he would have less reason to complain had he not so completely ignored all that has been done in this department of medical science for the last ten years. On the whole, perhaps, the book is worth reading, but it is hardly likely to prove of much use to medical students.

William Murrell, M.D.

Tables of the Physiological Action of Drugs. By E. A. Morshead, M.R.C.S., L.R.C.P. Pp. 16. London: H. K. Lewis. 1880.

This unpretending little work consists of a series of tables, compiled from Wood's *Therapeutics*, and is designed to illustrate the mutual physiological relation of the more important drugs. For example, we have lists of agents stimulating or depressing the cardio-inhibitory centre, the vaso-motor centre, the respiratory centre, and the centre of vomiting. Under the head of 'Genito-Urinary System', we find what drugs influence the colour of the urine, what drugs affect its specific gravity and reaction, and what increase or diminish the excretion of the different urinary constituents. The members of each group are arranged, as far as possible, in the order of their potency, and both officinal and non-officinal drugs are included. The work has been well and carefully done, and will prove of value to all interested in scientific therapeutics.

William Murrell, M.D.

Practical Histology and Pathology. By Heneage Gibbes, M.B. London: H. K. Lewis. 1880.

This excellent little work is admirably adapted to fulfil the purpose for which it has been written. It is short, clear, and eminently practical. The author is evidently an accomplished histologist, and his book conveys the impression that it is based upon his own personal experience in the preparation of specimens. After a chapter devoted to a description of the best forms of microscope for histological purposes, he devotes a chapter to each of the following subjects: The preparation of tissues for examination—Cutting sections—Staining—Double staining—Mounting—The methods of obtaining animal tissues for examination. The chapters on staining and double staining are especially good, the author having experimented largely with different staining materials. The rest of the book is devoted to the practical examination of the various tissues of the body; and it concludes with directions for the examination of morbid products.

NEW BOOKS AND NEW EDITIONS.

Dr. Aitken's *Science and Practice of Medicine*, Seventh Edition (Charles Griffin and Co.), appears without increased bulk, in its seventh edition. During the last twenty years, large impressions of this standard treatise have been exhausted. This valuable treatise has been thoroughly rewritten and

revised. The sections concerning the nervous system have especially undergone able and complete re-editing. Of its kind this treatise is unrivalled.

Dr. Bristowe's one volume *Handbook of the Theory and Practice of Medicine* (Smith, Elder, and Co.) has already reached a third edition—a just tribute to its exactness, its systematic and conscientious study of the whole range of medical subjects, and its thoroughly scientific and reliable teaching. This book will probably long maintain its position as the favourite student's guide to the higher examinations.

Mr. Furneaux Jordan's *Surgical Enquiries*, of which the second edition now appears (J. and A. Churchill), is enriched by the addition of the Hastings Essay on 'Shock'. Mr. Furneaux Jordan's 'Enquiries' are hardly appreciated as they deserve to be, for we do not hesitate to say that, among books of recent surgical literature in this country, hardly any other book can be named containing an equal amount of valuable, ingenious, and sound teaching, on the variety of subjects with which he deals. Among these subjects are—treatment of surgical inflammations, clinical study of syphilis, methods of operating for hare-lip, polypus, and removal of the tongue, new method of performing lithotomy, method of amputating at the hip-joint, etc. Mr. Furneaux Jordan's studies of counter-irritation, his method of using antiseptic sponge dressing, his studies of ganglions, ischio-cellulitis, and his operation for lithotomy, are especially worth surgical study.

Mr. Richard Barwell's *Treatise on Diseases of the Joints* (Macmillan and Co.), although nominally a second edition, is practically a new book, and will call for further notice in these pages. He maintains and extends the distinction which he at first drew between diseases commencing in the synovial membrane, and diseases commencing in the bone; a distinction which, though much criticised, he still considers to be essential to accurate and scientific diagnosis. Mr. Barwell is also heterodox in his views of the genesis of pyæmic joint disease, and other absorption diseases, on which he gives a lengthy and original chapter. It is a book founded on clinical experience, and its views should not be lightly set aside. ERNEST HART.

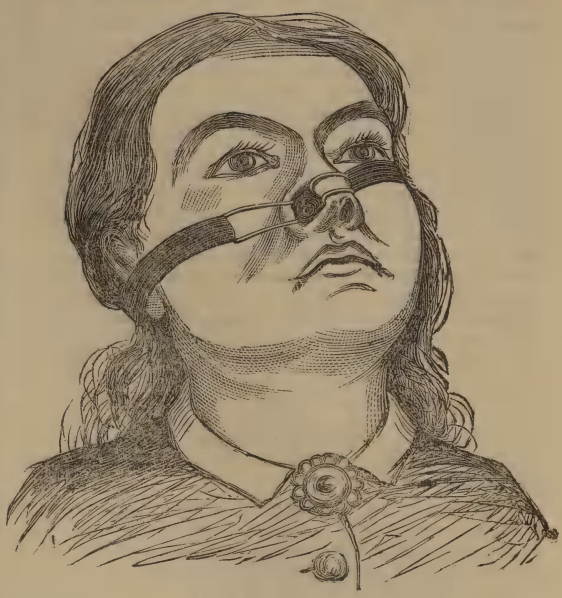
NEW INVENTIONS.

APPARATUS FOR ANTISEPTIC DRESSINGS.

Mr. David Marr, 27, Little Queen Street, W.C., follows the details of the practice of Professor Lister with great attention and ingenuity, and supplies each new desideratum for the dressings and antiseptic processes with fidelity. Mr. Marr's *Steam Spray Producer* is a powerful and reliable instrument, very effective, simple, and continuous in action. His antiseptic gauze, protective, carbolised, and now his chromicised catgut are all of them prepared with conscientious care, and supplied with a due sense of responsibility.

NEW SELF-RETAINING NASAL SPECULUM.

This instrument (by Mr. Cresswell Baber, of Brighton) serves the purpose of dilating the anterior nares during manipulations (or operations) in the nasal cavities, in which both hands are required, and has been in use since last January. It consists of two hooks of curved silvered wire, united by an elastic band, passing obliquely round the head, and provided behind with a buckle. The cut shows



the mode of application of the speculum. The double-curved hook passes over the tip of the nose, which it draws upwards; whilst the other hook is inserted into the outer angle of the nasal aperture. The amount of dilatation can be regulated by tightening or loosening the elastic band by means of the buckle behind; and the hooks, being to a certain extent flexible, their curve can be altered to suit individual cases. Whilst being very simple and inexpensive, this instrument presents the advantage that no portion of it projects appreciably beyond the anterior nasal aperture, an important point in operative procedures in the nose. This instrument is manufactured by C. Wright and Co., surgical instrument makers, of 108, New Bond Street, London.

MISCELLANY.

PROFESSIONAL EXPECTATIONS OF LIFE.—Eschnit has prepared a statistical table, showing the duration of life in the various professions in Bavaria. It confirms the already known fact, that medical men are shorter lived than the members of other professions. In Bavaria, out of every 100 individuals, 53 Protestant clergymen, 41 professors, 39 lawyers or magistrates, 34 Catholic priests, and only 26 doctors reach the age of 50.

A PROGRESSIVE MEDICAL SOCIETY. — Under this head, the *Philadelphia Med. Rep.* says:—A meeting of the Montgomery County (Pennsylvania) Medical Society was held lately, with Dr. Samuel Wolfe, of Skippackville, presiding. Dr. Mary Stinson, of Norristown; Dr. Alice Bennett, Chief of the Female Department at the Asylum; Dr. Annie Kugler, her assistant; and Dr. Chase, Chief of the Male Department, were unanimously elected members.

ANCIENT ANÆSTHETICS.—In a work entitled *Histoire de la Médicine à Troyes*, Dr. Guichet relates that the College of Physicians of that town brought an action against a certain Nicolas Bailli for administering internal remedies

to his patients, and *putting them to sleep*. In defence, Bailli declared that, having observed that in great operations, amputations, incisions, actual and potential cauterisations, many patients slipped through his hands for want of sleep, he had studied the secrets of nature, and had at last found a cordial, or marvellous essence, which put them to sleep softly, and appeased their sensibility to pain.

Wholesale Destruction by Lightning. — "A terrible experience—almost unequalled in military annals —is", says *The Colonies and India*, "recorded by a correspondent at the Cape of Good Hope in connection with the march of the Diamond Fields Horse to the scene of operations in Basutoland towards the end of last year. The men had outspanned for breakfast, when a heavy thunderstorm suddenly burst over them, so severe in its effects that they were forced to abandon their attempt to procure a meal, and remounted in the hope of riding out of the storm. Towards three in the afternoon, however, it broke upon them with increased violence, the rain falling apparently in sheets, and the flashes of lightning appearing continuous. At last a flash struck the troop, flinging seventeen horses with their riders to the ground, and killing ten men and five horses on the spot. Those who were not killed were all seriously injured, and it was long before animation could be restored in the case of seven of the men. The bits and stirrup-irons of the whole number were blackened, and many of the men, though personally uninjured, had their clothing rent by the force of the electric discharge."

The Quinine Manufacture in Italy.—It is stated that efforts are about to be made to acclimatise the cinchona in Italy, so as to increase the supply and lessen the cost of the manufacture, which is an important branch of Italian industry, and has been carried on at Milan and Genoa since 1870. The yearly consumption of quinine in Italy is 22,500 lb., of which one half is made in Milan, 6,750 lb. at Genoa, and the balance imported from Germany. The present annual production of quinine throughout the world is estimated as follows: America, 63,000 lb.; Germany, 56,250 lb.; Italy, 45,000 lb.; France, 40,000 lb.; England, 27,000 lb.; India, 12,500 lb. The Milan factory sends large supplies to Russia, France, and Austria. England is a considerable customer, and one half of the Dutch consumption comes from the same source.

Chian Turpentine.—Dr. Stiepowich of Chios writes to *Le Practicien* giving a few particulars of Chian turpentine which have not been previously recorded. He reckons that some of the trees must be several centuries old, as they grow very slowly, and yet among them are specimens 4, 5, and 6 mètres in circumference, and 15 to 20 mètres high. Some of the largest of them have been cut down, and the trunks used to make mill-wheels, their wood being very tough. He reckons that in the island there are about 1,500 of the trees, capable of furnishing 2,000 kilogrammes of turpentine, of which 30 per cent. would be impurities. The proprietors cultivate the tree for its fruit, which hangs in clusters, like grapes. They make incisions through the bark in the month of June, but not for the purpose of obtaining the turpentine. Their object is to prevent the resin from reaching and spoiling the flavour of the fruit. The resin exudes as a clear syrup, and for years past it has been allowed to waste, as the price obtainable for it was not sufficient to make it worth collection. The turpentine soon becomes opaque, and of a yellowish-white colour. The turpentine ceases to flow when the fruit begins to ripen. The latter is gathered for the oil which it yields, which is largely used in place of butter and in the preparation of sweet cakes. Books of botany have often stated that this oil is obtained from the lentisk, a shrub which yields the Chian mastic, but Dr. Stiepowich says the fruit of the lentisk has not been gathered for the purpose of obtaining oil from it within the memory of man. The sudden demand for Chian turpentine which has sprung up in London and Vienna has resulted in the production of about 600 kilogrammes during the past year. What has been previously sold, the writer declares, as Chian turpentine has been furnished by Venice.

American Items.—The following have been elected officers of the New York Academy of Medicine. *President* — Dr. Fordyce Barker; *Vice-President* — Dr. Robert F. Weir; *Trustee*—Dr. S. T. Hubbard; *Member of Committee on Admission*—Dr. J. H. Emerson; *Member of Committee on Education*—Dr. C. C. Lee; *Member of Committee on Ethics*—Dr. V. P. Gibney; *Member of Committee on Library*—Dr. C. S. Bull. Mr. John Jacob Astor has recently given 500 dollars for the improvement of the journal and circulating department of the library, which now contains over 17,000 volumes, and receives regularly 122 American and European medical journals.—The late Dr. David P. Smith, Professor of Surgery in Yale Medical School, has bequeathed to the Yale Medical College all his professional library and instruments, also two-fifths of all his property. This last sum is to be used in the endowment of the Chair of Theory and Practice of Medicine.—The *Louisville Med. News* will hereafter be under the editorial care of Dr. R. O. Cowling, Dr. L. P. Yandell having retired from his position as associate editor. Dr. H. A. Cattell assumes the position of managing editor.

Sir John Lubbock on Entomology.—Sir John Lubbock, in his annual address as president of the Entomological Society, passed in review the principal works and memoirs which had appeared recently; among others, the important researches of Grenacker, Lowne, and Gräber, on the mode of vision of insects. Recent observations seem to support the 'Mosaic theory' of Müller, under which each facet of the eye perceives a different portion of the field, while, on the other hand, the so-called simple eyes, or *ocelli*, appear to produce a true image. In that case we have the remarkable result that insects would see things directly with the compound eyes, and reversed with the simple ones. Among the most interesting contributions to our knowledge of the habits of insects are those of M. Fabre. He has continued and added to the very curious observations on the solitary wasps which he published some years ago. He then described the singular state of paralysis into which they threw their victims, which, if killed, would decay, and if buried alive would, in their struggles, almost infallibly destroy the egg or young larva of the wasp. The wasp, however, stings them in such a manner as to pierce the ganglia; and thus, without killing them, almost deprives them of all power of movement. One species of Sphex, which preys on a large grasshopper (*Ephippigera*), after having almost paralysed her victim in the usual manner, throws it on its back, bends the head so as to extend the articulators of the neck, and then, seizing the membrane between the head and body with her jaws, crushes the ganglion. M. Fabre found that, even after this treatment, the victims retain some power of digestion, and he was able considerably to prolong their life by feeding them with syrup. Unlike the genus Sphex, Bembex brings from time to time fresh food to her young; and it is remarkable how the Bembex remembers (if one may use such a word) the entrance to her cell, covered as it is with sand, exactly to our eyes like that all round. Yet she never makes a mistake, or loses her way. On the other hand, M. Fabre found that if he removed the surface of the earth and the passage, thus exposing the cell and the larva, the Bembex was quite at a loss, and did not even recognise her own offspring. It seems as if she knew the doors, nursery, and the passage, but not her child. Another ingenious experiment of M. Fabre's was made with Chalicodoma. This genus is enclosed in an earthen cell, through which, at maturity, the young insect eats its way. M. Fabre found that if he pasted a piece of paper round the cell, the insect had no difficulty in eating through it; but if he enclosed the cell in a paper case, so that there was a space even of only a few lines between the cell and the paper, in that case the paper formed an effectual prison. The instinct of the insect taught it to bite through one enclosure, but it had not wit enough to do so a second time.

The London Medical Record.

HARNACK AND MEYER ON THE THERAPEUTIC USE OF PILOCARPIN.

That jaborandi, or, rather, its alkaloids, are likely to come into more general use as powerful therapeutic agents, appears to be indicated by the numerous notices of their employment which have recently appeared in the periodical literature of Europe and America. Within the last year, the use of pilocarpin has been advocated by more than one writer—notably, by Dr. Berkart—and it may, therefore, be of some service to our readers to consider certain of the facts in regard to its action which have been recently brought to light.

In August last, Harnack and Meyer published (*Arch. für Exper. Path.*, etc., vol. xii, p. 366) the results of observations which they had made in Professor Schmiedeberg's laboratory in Strassburg on jaborandi and its alkaloids. They found that the jaborandi leaves contained not only the alkaloid pilocarpin, but also another similar body, which they named jaborin, which was, to a great extent, antagonistic to pilocarpin in its action. This second alkaloid they found to be present in all ordinary specimens of pilocarpin; and to the presence of this adulteration they ascribed the somewhat contradictory results obtained by former observers. The pure pilocarpin causes, in warm-blooded animals, at first irritation of the terminations of the vagus in the heart, and, indirectly, of the vaso-motor centres; and, later, and in larger doses, paralysis of these terminations and centres. In spite of the paralysis of the vagus, the pulse becomes slower and slower. In regard to its action on the heart and blood-vessels, it closely resembles nicotin. Pre-eminently may pilocarpin be characterised as a drug which causes increased glandular secretion. It acts most energetically upon the salivary, sweat, mucous, and lacrymal glands; and that this increased secretion is not caused by the vaso-motor paralysis, of which we have spoken, is shown by the fact that that paralysis comes much later than the out-pouring of the secretion, which is the first symptom of the action of pilocarpin. This result is probably due to an irritation of the nervous apparatus governing the gland. To the other actions of pilocarpin—on the pupil, the intestine, the uterus, etc.—we need not here refer.

The greatest value of pilocarpin appears to consist in its power of causing rapid elimination of effete material in cases of scarlatinal nephritis. It has been frequently administered in such cases, and with much benefit; and it appears likely that, if it be given with proper precaution, and with a due appreciation of certain dangers which surround its use, it may frequently be the means of saving life. What these dangers are has been lately very carefully pointed out by Dr. Seemann of Berlin (*Zeitsch. für Klin. Med.*, 1881, vol. ii, p. 552), and they demand the consideration of every intelligent physician. That œdema and uræmic phenomena, in cases of scarlatinal nephritis, are neither proportionate to one another nor to the quantity of urine passed, can readily be observed. In some instances, uræmia occurs when a normal quantity of urine is excreted, while in others no uræmic symptoms follow several days of anuria. In the former cases, the urine contains little urea, and in the latter the urea passes from the blood into the œdemic fluid, and hence becomes harmless for the time. When, however, at the beginning of convalescence, the excrementitious materials pass back into the blood, uræmia may come on; and obviously, the more rapidly they pass back the more danger is there. In virtue of its power of producing prompt and energetic increase of the sweat, salivary, and other glandular secretions, pilocarpin causes a very rapid reabsorption of the transudation, and, therefore, its administration may give rise to uræmic phenomena, which, though transient, may be highly dangerous. Seemann instances one case, in which this untoward result followed the administration of pilocarpin. Ohms (*Petersburg Med. Woch.*, 1878, No. 6), as well as Seemann, has observed that pilocarpin may cause, not merely dilatation of the small arteries, but even rupture of these vessels, and consequent hæmorrhage; and if we recollect that the child affected with scarlatinal nephritis lies on his back, too weak to cough up the rapidly augmenting mucus which the pilocarpin calls forth, it will be seen that the circumstances of the case may predispose to catarrhal pneumonia to a dangerous degree. Seemann gives the following indications for the use of pilocarpin in such cases of nephritis.

'1. Muriate of pilocarpin is useful in cases of scarlatinal nephritis, and may often save life when other remedies fail; but it must not be resorted to except in very serious cases. 2. When, after its successful administration, the œdema begins to lessen, cure should be left to nature and to other remedies, because renewed doses of pilocarpin may cause too rapid absorption of the transudation, and may thus lead to uræmia. 3. After each dose of pilocarpin, the state of the respiratory organs must be carefully watched; if the bronchial mucus be not satisfactorily expectorated, or if the slightest indication of pneumonia show itself, further doses of the drug must not be given.'

We believe that, if such indications be borne in mind, pilocarpin may be used safely and with great success in cases of scarlatinal nephritis which are otherwise hopeless; but the preparation used must be obtained from a thoroughly trustworthy source, and must be free from the jaborin which most specimens are said to contain, and which materially modifies the action of the drug.

J. Graham Brown, M.D.

PAGE ON FEVERS.

In this paper on fevers,* Dr. Page gives, in particular, valuable information on the etiology of scarlatina. The following remarkable case will show the danger of allowing scarlatinal patients, who are 'fever-free', to mingle with their neighbours. 'On April 1st, 1878, Master P. left school at Wimbledon, on the fortieth day of an attack of scarlatina, for his home at Brighton. Before leaving, desquamation had to all appearances terminated, the feet having desquamated twice. Also, he had repeated carbolic acid baths, and he had left all his infected clothes behind. After reaching Brighton, his face and feet

* *Facts about Fevers*, etc., by Dr. David Page. Edinburgh: Maclachlan and Stewart. Second Edition.

desquamated again; and four days after his arrival his mother fell ill with scarlet fever.'

This case points to the danger, not only of discharging scarlatinal patients when fever-free, but to the danger of discharging them when the first desquamation has ended. In scarlatina there is, so to speak, a relapse of the desquamation, as there is a relapse of the fever.

Of the danger which might follow the breaking-up of boarding-schools after outbreaks of scarlatina, the following is an example. 'A girl, aged 17 years, came on a visit to an orphanage, February 23, 1880. She had been a former inmate, but was just then out of a situation. She slept with one of the elder girls. On February 25th she fell ill with scarlet fever, and was removed to the sanatorium of the institution. The girl with whom she slept ought to have left on the 28th of February for a situation in the west of England, but it was decided to postpone her departure and keep her under observation for a week. On the evening of the 28th she sickened with scarlet fever.' One has only to think of a few such cases distributed over the country on the breaking-up of a school, to see the cause of several epidemics.

Speaking of mild and severe cases of scarlatina, Dr. Page says: 'Infectious diseases exhibit widely different degrees of severity; but it is well to bear in mind that the slightest and most incipient degree is as intensely infectious as the most alarming and developed, and that the same unrelaxed precautions are required for the one as for the other. Mildness of attack is only a matter of good fortune to the sick person thus attacked, and gives no security whatsoever to the healthy. Do not forget that infection is a quality of the fever-poison, and not altogether one of dose or length of exposure. The mildest case and a moment's exposure may give the infection and the disease in its most malignant form, the issue depending upon the state of the individual and his sanitary surroundings at the time; or, in other words, the seeds of infection are always the same, the result depending upon the soil in which they happen to be sown. I have known some of the worst and most fatal outbreaks of scarlet fever to have been preceded in the affected households by the mildest possible attacks.'

Of very many instances of this kind, the following, told by a late eminent physician, Dr. Murchison, may serve as notes of warning. 'An officer in the Limerick Artillery, aged 22 years, arrived in London on September 2nd, 1858. On September 5th, in the afternoon, he visited a friend, whose little girl had scarlet fever, but so slightly that she was not confined to bed. He took the girl on his knee and kissed her. On the morning of September 8th he was quite well; but towards evening he was attacked with headache, heaviness, and sore throat, followed by a dusky, scarlet rash, ulcers on the tonsils, constant delirium, sleeplessness, and great prostration. He died on September 14th, at 11 A.M.'

The second case, with its sad ending, told by Dr. Murchison of himself, is even more instructive, as it shows how very slight indeed, and even unrecognisable by a skilled doctor, the source of infection may be. 'In the afternoon of May 14th, 1863, while from home, I was myself seized with general pains, fever, sore-throat, and great prostration. I did not get home until eleven o'clock, and all next day I was very ill in bed with the same symptoms, but there was no rash. Suspecting that I had scarlatina, I sent for a medical friend to advise me as to sending away my only child; but, by the time that he arrived, late in the evening, I was so much better that he gave a decided opinion that my attack was not scarlatina; and next morning, as I was able to get up and attend to my duties, I believed that he was right, and did not send my child away. I have no doubt now from the sequel, and from what I have seen in other cases, that my attack was scarlatina. I may add that at the time I was much exposed to the disease, that I never had scarlatina before, nor have I had it since, and that for many months after that attack I was anæmic and out of health. On and after May 16th I saw my child as usual. On the morning of May 20th she was attacked with scarlatina in a malignant form, of which she died on the 27th.'

Of the conveyance of infection by clothing, the following is a striking instance. 'On February 15th, 1880, M. S., whose children were just getting better from scarlet fever, and one of whom had died, February 11th, after an illness of fourteen days, sent a woollen jacket worn by her whilst nursing them to her sister-in-law, as a pattern for a new one. This sister-in-law, a girl aged 20, lived with her aged mother, some four miles distant, in a remote valley of the English Lake District. When she opened the parcel containing the jacket, she jestingly remarked to her mother, "I hope I may not catch the fever from it". She cut a pattern from it, wrapped it up, and sent it back that forenoon. Next day, Feb. 16th, she complained of sore-throat towards evening, and she died on Feb. 17th of malignant scarlet fever. She had not been from home for at least a fortnight, and there were no other cases before or afterwards nearer than her sister-in-law's.'

On the question of infection by third parties, Dr. Page believes that disease may be carried in this way. If Dr. Page mean that third parties may in some way collect, on their persons, the morbid discharges of the sick, and in some way, probably by direct contact, infect others, we have no objection to the statement. It is perhaps, nay more, even probably true; but if he mean that nurses of the sick, physicians, and visitors to the sick, being themselves healthy, and having, in their respective degrees, regard to cleanliness, carry infectious diseases, then not only do we think that there is no evidence in favour of it, but, we think, conclusive evidence against it, of which we give the following as a sample.

'Not only, however, is fever not communicated to those living outside a fever building, but it is not communicated to those living inside one, unless these come into direct and, I daresay, more or less prolonged contact with the sick. In the Homerton Asylum, fever has been communicated to nurses, medical officers, and wardservants—persons in direct contact with the sick; but in no single instance has the disease been communicated to housemaids, cooks, or porters, nor to any of the numerous tradesmen whose business brings them to the asylum; nor have I ever heard that any of the nurses, persons in direct contact with the sick, have carried any infectious fever to their friends. During the summer of 1874 the Homerton Asylum was occupied by 50 men and boys engaged in painting and otherwise repairing the wards and corridors of the hospital for a period of about three months. During this time they came into daily contact with those directly engaged in the treatment of the sick, but they neither contracted fever themselves nor did any one of them carry fever to his family or friends, although there were about 200 patients in the asylum at the time.

'It may be fairly taken for granted that if infection be carried by third parties, it will, *par excellence*, be carried by those whose duties bring them into the closest and most prolonged contact with the sick. I have already mentioned the case of the nurses, but the case of medical officers of fever-hospitals is much stronger: these in their visits pass from one contagious fever to another: from typhus fever to scarlet fever, from scarlet fever to enteric fever, from enteric, typhus, and scarlet, to cases of pneumonia, acute rheumatism, dyspepsia, phthisis, brain-softening, meningitis, tuberculosis, pleurisy, bronchitis, pericarditis, peritonitis, melancholia, purpura, hysteria, periostitis, diarrhœa, ovarian abscess, erysipelas, morbus Addisoni, etc., these being the more common of the acute non-specific diseases which find their way into fever-hospitals. They are in the wards hours together by day and by night; they sit about on the patients' beds making notes; they come into very close contact with them whilst auscultating; in particular they come into contact, then, with the steaming volume of infected (gas) air which rises when a perspiring patient is raised in bed; they examine stools, etc., and make *post mortem* examinations; and all this time wearing, for months together, the same hospital suit of clothes. Surely these of all persons in the world are the persons to spread contagious disease indirectly, if there be any truth in the doctrine of *intermediate* contact. If it be possible to saturate clothing with contagion in its most concentrated form, surely theirs must be so saturated; and yet such medical men are not known to carry contagion to their patients, nor are epidemics of fever known to occur in fever-hospitals. The present speaker has been a resident in large fever-hospitals for about eleven years, has seen and treated several thousand cases, but he knows no instance in which medical officers were the means of communicating contagious disease. During the last four years nearly 4,000 cases of contagious fever have been treated in the Homerton Fever Asylum, with a certain proportion of non-specific cases; but of all these only one case of fever developed itself in the asylum—a thing no more remarkable than the development of a case of fever in any institution, or in any private house. The truth is, that the notion of intermediate contagion—of contagion by third parties, *i.e.*, by persons who are themselves healthy—has no foundation in fact, and is, I think, conclusively refuted by the experience narrated. It is very much like that other notion of the special susceptibility of puerperal women for scarlatina, a notion which may be true, but of which I am well informed there is no evidence. I think, then, I may take it for granted that direct personal contact is the invariable condition of the production of a contagious disease.'*

On the subject of disinfection, we think Dr. Page's instructions are excellent, chiefly because they involve free exposure to wind and weather, and the liberal use of soap and water, the, as we believe, active agents in all efficient processes of disinfection. On the question of the incubation-periods we think Dr. Page is too definite. That of small-pox, which used to be considered the most certain, possibly varies between five and twenty-one days, instead of ten and fourteen; typhus cannot be limited to fourteen days; and, as regards enteric fever, the reporter published in the *British Medical Journal* recently three cases, in which, if my etiology were correct, the incubation-period was at least six weeks, probably longer. Of diphtheria, the incubation-period is, to say the least, very doubtful; and as regards scarlatina, there is some evidence which points to the conclusion that in some cases, at least, it exceeds seven days. That of measles, like small-pox, possibly varies from five days to twenty-one.

One remark before we conclude. Dr. Page says, '*Re-vaccination successfully performed affords certain protection from small-pox*'. This is one of the kind of statements which delight anti-vaccinators, because it can be easily shown to be incorrect. Neither vaccination nor re-vaccination affords certain protection from small-pox; but speaking generally, vaccination and re-vaccination, efficiently performed, protect almost, if not absolutely, from death from small-pox, in the great majority of persons absolutely from small-pox; and in the well-vaccinated minority in whom the disease does occur, it is for the most part a mild and rarely, if ever, fatal disorder. Speaking from his own experience, the reporter has never known a re-vaccinated attendant upon small-pox cases contract small-pox, however long exposed; and the great majority of the attendants upon small-pox during the epidemics of 1870-71 and 1876-77, during which time the Homerton Fever Hospital was used for small-pox, were persons who had not had small-pox previously, and who had not been previously rendered safe from it by 'seasoning', whatever this may mean. During both of the periods referred to, there were upwards of 250 cases for about four months in the hospital, and on one occasion close upon 300. ALEX. COLLIE, M.D.

* *Practitioner*, Oct. 1876.

RAYNAUD ON SUDDEN DEATH IN CASES OF HYSTERIA.

AT a meeting of the Medical Society of Paris, M. Raynaud reported (*Revue Méd.*, Feb. 5, 1881) a case of sudden death, which had occurred, as he stated, in the midst of an hysterical attack. The woman was 37 years old, unmarried, and had long suffered from very singular attacks of vapours, and, from time to time, formidable attacks of hysteria. She had eczema of the foot and hand, which seemed to excite attacks. On each occasion she was seized with laryngeal spasm, like that of hydrophobia, and plunged her nails into the flesh of her hands. Fragments of nails had frequently to be extracted from the flesh; but, on the last occasion on which this was done, she complained, on the following day, of severe pain in the back, like the true 'hysteric clavus'. She was feverish; temperature above the normal; pulse frequent. A blister was applied, and dressed with morphia. The next day the pain had changed its place; it was in the neck, and excited trismus and howling exclamations. The patient preferred the sitting position, and suffered extremely when the head was moved. She took from 5 to 6 centigrammes of morphia a day, by hypodermic injection. Two days passed; the symptoms increased in extent; pharyngeal spasm followed, with frequent expectoration or trismus, and dyspnœa set in. The slightest touch excited her to fury. Her character changed; she became insolent and abusive. She presented an absolute picture of hydrophobia. Careful inquiry showed that she had not been bitten, and that no dog had been in the house. Two days afterwards, the pain changed to her abdomen, and remained there for three or four days, accompanied by con-

traction of the diaphragm, and arrest of breathing without thoracic expansion. Finally, on the following day, the patient was livid, cyanosed; her pulse was imperceptible; she was groaning, and her agony extreme. The next morning, she was a little calmer. Towards the middle of the day, a fresh spasmodic attack occurred, to relieve which artificial respiration was vainly employed. The patient succumbed, in spite of all that could be done.

M. Dujardin-Beaumetz stated, in the discussion, that he had seen two hysteric patient succumb suddenly. Each time he had found kidney-disease. In the first woman, one day, quantities of albumen were found; next morning, nothing. The necropsy showed interstitial nephritis. The second patient had hysteric hip-disease, and died suddenly with complete degeneration of the kidneys.

Dr. Raynaud stated that his patient's urine had been frequently examined for albumen, but he had never found any.

M. Rendu considered that this was probably a case of spino-bulbar meningitis in the cervical region. The patient had fever and pain localised in this region. He had seen, in the service of M. Potain, a patient suffering with not very intense, but very frequent, attacks of clonic spasm, and paroxysms of strangulation. A necropsy was made, and chronic spinal meningitis was found.

M. Charcot had found lateral sclerosis in an hysterical person who had died suddenly.

M. Raymond stated that, when house-surgeon in the wards of M. Vulpian, in the Pitié Hospital, he had seen two men succumb with trismus. They had attacks like hydrophobia, as in the patients of M. Raynaud, above described, and tetanic symptoms, with spasms of the limbs.

M. Vulpian thought (and the necropsy confirmed his opinion) that the symptoms were due to cervical meningo-myelitis. Death occurred in the first case in seven days. The second patient presented the same set of symptoms for five days, and also died with the same lesions.

M. Millard had under his care an hysterical girl, suffering with dysphagia, trismus, and tetanic symptoms. She succumbed, also, to suppurative meningitis and trismus, attributed by her father to a cold draught of air.

MASON ON A NEW METHOD OF TREATMENT OF FRACTURE OF THE NASAL BONES.

DR. LEWIS D. MASON, Surgeon to the Long Island College Hospital, New York, reports in the *Annals of Anat. and Surg.* (*Cincinnati Lancet and Clinic*) two cases of fracture of the nasal bones treated by the method recommended by him in the *Annals*, vol. ii, page 107.

The first case is that of a man, aged 27, who fell from a height of 11 feet on the pavement. There was comminuted fracture of the nasal bones, and the nasal processes of the superior maxillæ were broken. There was also a lacerated wound of the right inner canthus. There was marked serous infiltration of the tissues, but flattening of the bridge of the nose was quite apparent. Marked crepitus, with free lateral motion of the nasal processes, was present. The depressed bridge was elevated in the usual manner, care being taken to restore the full calibre of the superior meatus by lateral, as well as forward, pressure of the probe. As no especial line of fracture could be determined, owing to the extensive comminution and swelling, the needle was passed as nearly as possible through the base of the nasal processes between the comminuted fragments, not meeting with any resistance. A ribbon of thin India-rubber was passed over the nose, made moderately tense, and the ends fastened to the point and head of the needle by puncture. Over all, a cloth wet with evaporating lotion was applied. An anæsthetic was not necessary during the passage of the needle, the patient being in a state of partial alcoholic coma. The needle was withdrawn about the tenth day following the operation. Considerable suppuration resulted from the wounds on the forehead and inner canthus. With this exception, the case progressed favourably, and a few days subsequently he left the hospital. As the tissues were somewhat congested, the outline of the nose could not then be accurately determined. The patient returned for inspection on December 28th. The nose was quite straight, the swelling had entirely subsided, and the nasal respiration was perfect.

The second case was reported to Dr. Mason by Dr. C. B. Nancrede, of Philadelphia. It was one of extensively compound comminuted fracture of the nasal bones and of the nasal processes of the superior maxillæ, involving also the nasal spine and eminence of the frontal bone, and possibly a displacement of the vertical plate of the ethmoid. The injury resulted from the kick of a horse. Not having a proper pin at hand, Dr. Nancrede passed a long insect-pin between the hindermost fragments and what remained of the nasal processes of the superior maxillæ. A strip of ordinary adhesive plaster, having a slit for the head of the pin, was then passed over the bridge of the nose, and the pin's point was forced through the other end. A wet dressing was applied, and rest in bed enforced. At the end of the fifth or sixth day the pin was removed. Before the removal of the pin the nose was occasionally moulded by Dr. Nancrede's fingers or those of an assistant. When the patient was discharged, his nose had certainly as good an appearance as if no injury had been sustained.

Dr. Nancrede has since been informed that considerable necrosis ensued. This, of course, would have resulted under any plan of treatment, being due to the extensive comminution of the bones. The operator can bear testimony to the excellence of the method, as being much less painful and annoying in the end than those usually employed, and is convinced that by no other method could the natural contour of the injured feature have been restored and maintained.

BOUVERET ON MORBID SWEATING.

M. BOUVERET, in an excellent thesis on this subject (*Jour. de Méd.*, Jan. 1881), mentions some remarkable and important cases of ephidrosis or local sweating. Sweating of the legs, mentioned by Verneuil as a frequent sign of deep-seated varices: there is a notable and habitual increase of the sweat, which is often accompanied by itching, eczema, and erythema. The fact is important to note in the obscure diagnosis of deep varicose veins.

Another singular example of local sweating is parotidean ephidrosis; it occupies the region of the parotid gland, sometimes extending over the neighbouring parts, and even over a considerable portion of the face. It is not continuous, but generally

intermittent, and only appears during mastication. It follows injury, such as a wound or opened abscess of the parotid gland. The duct of Stenson is most often closed, but the phenomenon is not due to a transudation of the saliva, as one would suppose: it is really a local sweating of reflex origin. Facial ephidrosis is also commonly reflex, and due to excitation of the nerves of taste. The excessive secretion sometimes extends over the entire face, sometimes it remains unilateral; it has been observed exactly limited to the region of the face supplied by the superior maxillary branch of the trigeminal nerve.

Von Graefe has seen four cases of palpebral ephidrosis. The skin of the eyelid presented well-marked hyperæmia, and, on examination by a lens, during effort or emotion, a clear fluid could be seen to escape from a multitude of little orifices. Ephidrosis may occupy one entire side of the body.

Habitual general sweating may show itself in variable and ill understood etiological conditions. One of the most interesting is that of the menopause, which M. Liégeois has studed very completely. It is well known that, at the menopause, women are subject to flushes of heat and sweating; but what is less known is, that these sweats, though independent of any other affection, may become morbid. It may not be the case always of women who no longer menstruate; the hyperidrosis may come earlier, and appear when the near approach of the menopause announces itself by certain irregularities of menstruation. It is not always a passing symptom; M. Liégeois cites several cases where women were affected by it for several years; he was able, however, in most cases, to check it by the use of atropine. In most of these patients the hyperidrosis appeared especially towards the end of the night. M. Liégeois advises the administration of atropin some hours before the expected return of the sweating. Half a milligramme is a sufficient dose; it is well to continue the medicine several days after the cure.

Beside these forms of morbid sweating, M. Bouveret has studied those which are characterised by a peculiar colour. Chromidrosis, for example, or blue sweat, so rare that its existence has been denied by many authors, is affirmed as a scientific fact. Like sweating of blood, this singular alteration of the sweat appears most often among that set of symptoms which characterises hysteria. Violent moral emotion is frequently the occasional cause of it; the eyelid is nearly always first attacked, and most often the lower one; blue sweat may, however, appear in other regions, the feet, the axillæ, the epigastrium forehead, cheeks; the ears are always spared. Sometimes the blue coloration extends over large surfaces; sometimes it is developed on little patches of the ntegument. The colour varies from blue to black, passing sometimes to deep violet. The abnormal secretion proceeds by successive attacks, returning at variable intervals, generally preceded, as in the first attack, by disorders of menstruation, and by local derangements of the circulation or of sensibility. The colouring matter which gives the special aspect to this secretion is analogous to indigo, and its secretion seems to be produced under the influence of a vaso-motor disturbance. The same is true of hæmatidrosis, a phenomenon very much discussed, and of which the labours of M. Parrot especially have clearly shown the nature.

The sweating of blood, which shows itself nearly always in hysterical women, may occupy very variable extents of the integument, sometimes oozing out in droplets, sometimes in the form of filiform jets; the liquid is composed of blood containing all its elements. It is intermittent, proceeding by steps, coincident with painful eruptions of the skin. These hæmorrhages are never alarming from their abundance; moreover, the fluxes of blood in hysteria often enjoy the singular privilege of not compromising the health or the life by reason of their quantity; for the hæmatidrosis should be regarded as a sort of hæmorrhagic hysteria, all the more so as it accompanies, in many cases, hæmorrhages of the stomach, of the uterus, of the bronchia, of which the neuropathic nature cannot be doubted; its existence, on the contrary, is doubtful except in hysteria.

The remarkable and nearly constant effects of atropin, administered according to the method of Sydney Ringer (attributed by M. Bouveret, *more Gallico*, to M. Vulpian), are clearly demonstrated. In a good many diseases, far from respecting profuse sweats as an useful symptom, on the contrary, it is desirable we should combat them; this is especially the case in acute articular rheumatism, where the abundant sweats may be suppressed without inconvenience.

KYBER ON AMYLOID DEGENERATION.

THE reagent which Dr. Kyber (Virchow's *Archiv*, Band 81, Heft i and ii) found most reliable in these histological researches was Virchow's iodine and sulphuric acid test; this, while permitting the recognition of very minute departures from health, is not liable to become a source of error, as is anilin-violet, by undergoing the characteristic change with certain tissues (colloids), which are not amyloid. The sulphuric acid employed was of 2 per cent. strength, and stress is laid upon the dilution being weak.

The Amyloid Spleen.—The author recognises the three varieties, according as the degeneration affects the parenchyma, the lymphatic sheaths (sago-spleen), or both these structures combined.

In the first, the organ shows in the earliest stages only the changes resulting from chronic irritation; the degeneration commences around the capillary veins, and gradually converts the parenchyma into amyloid substance; a part of the round cells and parenchyma undergo atrophy, while the greatest part of the round cells, the intercellular substance, and the reticulum and a part of the arterial capillaries undergo amyloid change. The peculiar cells of the walls of the capillary veins remain unaffected, only a few of them undergoing degeneration in extreme cases. The lymphatic sheaths of the arterioles present various stages of atrophy, but may be well developed or even hypertrophied. The blood-vessels show changes which indicate interference with the circulation. The arterial capillaries are compressed even to the closure of their lumina; the numerous capillaries of the lymph-sheath are obliterated by the atrophy of these structures. In consequence, the capillary veins are full of red corpuscles, together with an undue proportion of white.

In the sago-spleen, the degeneration commences in the walls of the capillaries of the Malpighian bodies, and partially involves the connective tissue net-work, but the lymphoid cells appear to escape altogether. The lesion does not extend up the arteries beyond the adenoid sheath. The walls of the smaller arteries are affected, but not necessarily; the central artery of a Malpighian body may be quite healthy, while the structures around it may

present advanced changes. The circulation of the blood is interfered with by these changes; the author has failed to inject the capillaries of amyloid Malpighian bodies, though Billroth succeeded in doing so. But in the highest grade of degeneration many capillary veins are recognisable as such, although the variations in calibre, which are very marked in the normal spleen, show even greater extremes, some being very much narrowed, others notably dilated. These changes, and the partial atrophy of the vessels, account for the anæmia of the sago-spleen.

The combined form presents the characters of the two foregoing, but it is not an extension of degeneration from the Malpighian bodies and lymph-sheaths to the parenchyma. In it, as in the parenchymatous form, the lymph-corpuscles within little affected Malpighian bodies showed the amyloid change, indicating their origin from the parenchyma. In one case when the parenchyma and lymph-sheaths, as well as the Malpighian bodies, were amyloid, the follicles appeared yellow, which he explains by supposing that a new formation of follicles takes place under the influence of the irritation; and this case suggests, the author thinks, that amyloid degeneration, though normally a chronic process, may take place acutely.

The Amyloid Liver.—The seat of the lesion in this organ has been the subject of much dispute; Meckel and Virchow having described it as affecting the liver-cells, while Wagner and others maintain that the capillaries undergo the amyloid change, the alterations in the cells being confined to atrophy. The discrimination of this point is not easy; out of twenty-two cases there were seven in which he could not, after most careful examination, express an opinion; in eight, the capillaries, connective tissue, and cells, were all affected; in two only, the capillaries and connective tissue; and in five, the parenchyma alone. He is certain that the liver-cells are affected, as he has isolated them by pencilling, and has recognised the change in unmistakable liver-cells, so that he repeats his former statement, that the liver is the only organ in which we find an extensive amyloid degeneration of epithelium. He has never found the trunk of the hepatic artery or its larger branches affected, only the small interlobular arteries. The hepatic and portal veins are not uncommonly affected even in their larger trunks; even the vena cava may show amyloid degeneration. The changes in the blood-vessels do not correspond to the general amount of change in the organ; he lays it down as a general rule, that the small arterial twigs sometimes undergo only very slight changes in organs with marked changes of particular parts, or very severe changes with slight change in the organ as a whole. The small veins and the great blood-vessels present similar aberrations.

The Amyloid Kidney.—Out of twenty-nine cases of amyloid kidney, there were three cases in which there was exclusive affection of the medullary cones, eight in which the cortex alone was affected, and eighteen in which both were diseased. He thinks there was no evidence that either of the first two were simply early stages of the last, as in the earliest stages of the latter it occurs as the slightest affection of both the cones and the cortex. Amyloid degeneration of the epithelium occurs only as a quite exceptional and very limited condition. The hyalin cylinders are never truly amyloid, as shown by their never colouring with Virchow's reagent (iodine and sulphuric acid), although they often appear red with methyl-violet.

Amyloid Disease of Genito-Urinary Organs.—Dr. Kyber has found traces of amyloid degeneration of small vessels in the mucous membrane of the ureters and bladder; also the muscular fibres of these organs showed the reaction. In the uterus he found both the small vessels, and in one case the muscular fibres, affected. As a rule, examination of the testicle gave negative results, but in one case, of a child, he found a few of the vessels affected, not the gland-substance. In the prostate he found both vessels and muscular fibres affected, but never any change in the caput gallinaginis or mucous membrane beyond that point.

Amyloid Disease of Mouth and Alimentary Canal.—The vessels of the tongue were slightly affected in one case out of five examined. In the same case, a few vessels of the tonsils and the mucous membrane of the pharynx, and the upper part of the larynx, showed the reaction. In all the five cases, the vessels in the mucous membrane of the œsophagus were affected. Below the cardia, the capillaries of the mucous membrane were generally affected; in some cases the mucous membrane itself. The follicles and Peyer's patches were unaffected, though the vessels around them were often amyloid. The epithelium showed the reaction only rarely and in special instances. In the submucous tissue the arterial twigs were generally affected. The proper muscular coat of the stomach and intestine was often affected. In one case, many of the gastric glands, both near the cardia and the pylorus, were amyloid.

Amyloid Degeneration of the Lymphatic Glands.—Kyber says that in the glands examined there was great irregularity in the lesions; sometimes the parenchyma, sometimes the arterial twigs being affected. The inguinal and axillary glands were never affected, even in most advanced degeneration of the internal organs. The affection of the mesenteric glands bore no relation to the degree of degeneration in the intestine. The swelling of the mesenteric glands had nothing to do with the degeneration, but was probably the result of intestinal catarrh, which often existed before the degeneration occurred. Where the intestine had not suffered from any acute inflammatory attack, the amyloid glands were anæmic and hard; but when such inflammation had preceded death, they were softened and injected. The medullary substance of the glands was always free from degeneration.

Amyloid Degeneration of the Pancreas was usually present in cases of generalised amyloid disease. The organ was dense and anæmic; the capillaries surrounding the acini of the gland were amyloid; the epithelium was fatty and partially destroyed, and there was an increase of the interlobular connective tissue.

Amyloid Degeneration of the Thyroid Body was completely absent in four cases of generalised amyloid degeneration, but in nine cases some of the smaller arterial twigs, the capillaries, and more rarely the interalveolar connective tissue, were affected. In two other cases, the connective tissue was extensively, and the vessels only, slightly affected. The organ in all cases presented more or less hypertrophy and induration. The alveoli were filled with detritus and colloid masses, which never gave the amyloid reaction. He met with only one case of extensive amyloid degeneration of the thyroid.

Amyloid Degeneration of the Suprarenal Capsules.—Out of eighteen cases of generalised amyloid disease, these organs were free in three; in eight, the cortex was amyloid and the medulla free; in one, the medulla was amyloid and the cortex free; and in six, there was a combination of these. In extreme cases they were much enlarged, and as hard as wax. In the cortex, the vessels and connective tissue were amyloid; the cells were fatty; but this, according to Virchow, is not a pathological condition in this situation. In the medulla were amyloid vessels with lumps, which he believes to be amyloid nerve-plexuses. These lumps are said by Freidreich to be amyloid cells; but in these cases the cells were not affected.

Amyloid Degeneration of the Great Organs of the Circulation.—In the large arteries, the amyloid degeneration affected the inner coat; in the small arteries of the organs, as well as in all veins in which three coats could be recognised, the middle coat was affected. Dr. Kyber gives five cases in which the endocardium and large vessels were affected.

ROBERT SAUNDBY, M.D.

KRASKE ON A SERIOUS MISHAP AFTER GASTROSTOMY.

DR. P. KRASKE reports (*Cent. für Chir.*, No. 3, 1881) a case in which after gastrostomy had been performed by Professor Volkmann, for advanced cancerous disease of the œsophagus, the patient, a man, aged 48, died on the second day in a state of coma. In the operation, which was performed under the carbolic acid spray, the stomach, found to be not quite empty, was fixed to the edges of the external wound by a dozen silken sutures, some of which were passed through the whole thickness of the anterior wall of the viscus. No further steps were then taken, save covering the wound with antiseptic dressing, as it was proposed to open the stomach at a later period. At the *post mortem* examination, the condition of the wound was proved to be very good; but, on the anterior wall of the stomach, near the pylorus, and also on the left lobe of the liver, was observed a thin layer of loosely adherent exudation of a dirty-brown colour, which, on microscopical examination, was proved to contain gastric contents, namely, vegetable cells and *débris* of distinctly striated muscular fibre. The peritonitis had not extended to any other part of the abdominal cavity.

In his remarks on this case, Dr. Kraske states that the peritonitis which, though limited, was the cause of death, had been set up through the discharge into the peritoneal cavity of a portion of the contents of the stomach. Apart from the fact that the appearance of the wound, and the condition of the peritoneum in its immediate neighbourhood, forbad any supposition of the peritonitis having been the result of an infection at the time of the operation, certain constituents were found in the inflammatory exudation, as to the nature and origin of which not the least doubt could be entertained. These constituents had certainly been discharged from the interior of the stomach; and, as the wall of this viscus had not been incised, they must have passed through the punctures occupied by the sutures. This case, then, demonstrates that it is possible, after an incomplete gastrostomy, for the contents of the stomach to be discharged through the small perforations made by the sutures. This result, it is stated, is not surprising. The stomach, when dragged forwards and retained in an abnormal position, has naturally a great tendency to sink backwards; and the margins of the small punctured wounds may be thus stretched and torn so as to permit during coughing or vomiting the free passage of gastric contents into the peritoneal cavity. This accident, it is evident, is the more likely to occur when the stomach is well filled, but still cannot be effectually guarded against by operating on a stomach with but scanty contents.

Dr. Kraske, in considering whether and how this accident could have been prevented, states that it occurs at once to the surgeon that the wall of the stomach might have been transfixed through its external and middle coats only, the mucous layer being left intact. It has been proved, however, that this is not a safe course, since the stomach, in the course of a very few hours after the operation, tears itself away from the sutures, and falls backwards to its normal position. The danger of discharge of the gastric contents might be certainly prevented by rejecting sutures, and by attempting by some other means to keep the anterior wall of the stomach in sufficiently prolonged contact with the external wound for the establishing of firm adhesions. How such a plan, which, as is well known, has been carried out by Volkmann with much success in the treatment of hydatid cyst of the liver, is to be applied to so movable an organ as the stomach, is a question that has yet to be settled.

It is next considered whether, with the object of preventing extrusion of the gastric contents along the sutures, gastrostomy ought not to be always performed in one stage. There can be very little doubt that this accident might be prevented by at once incising the stomach after it has been fixed by sutures, and by washing out its interior. Dr. Kraske does not give any decided opinion as to the necessity of giving up in future the operation of gastrostomy in two stages; but to those who practise the single operation, he recommends, that the wall of the stomach be transfixed by two sets of sutures, the first involving the serous and muscular layers only, and the second, applied after the viscus has been incised and opened, involving also the mucous coat.

W. JOHNSON SMITH.

FOULIS ON *POST MORTEM* EXAMINATION OF THE EAR.

DR. FOULIS (*Brit. Med. Journ.*, Oct. 16, 1880) describes the following simple plan of splitting open the tympanum *in situ*, which he employed during the preceding thirteen months in his capacity of pathologist to the Glasgow Royal Infirmary. He recommends it as useful for ordinary *post mortem* purposes, where time will not usually permit a minute dissection of the ear. (When the ear is the chief object in the inspection, however, the author would employ the method of Toynbee or other authors.) After the skull has been opened, the brain removed, and the dura mater torn off from the base of the skull, the eminence corresponding to the superior semicircular canal is seen on the upper surface of the petrous bone. The ordinary *post mortem* chisel is then inserted just to the outer side of this eminence, with its cutting edge parallel to the sawn edge of the skull, and perpendicularly to

the anterior surface of the petrous bone. By a smart blow or two of the mallet, the chisel is driven into the bone, and the inner part of the petrous bone detached, which may then be pulled further towards the median line of the skull. On the outer side, the membrana tympani is left intact with the malleus and incus; on the loosened piece of petrous bone, the stapes and parts forming the inner tympanic wall are seen. After examining these, the loosened fragment of petrous bone may be torn out, and, by further splitting up with the chisel, the state of the cochlea and semicircular canals may be approximately ascertained. The whole procedure need not occupy more than a minute or two. The ears of 112 bodies have been examined by this method, with the result that in seventeen cases (nearly 15 per cent.) definite changes were found in or near the tympanic cavity. Inspection of a number of cases in private practice gave practically the same results as to relative numbers. The author gives a very brief summary of the seventeen hospital cases; from which it may be noted that, whilst in five there was tubercular disease of the lungs or other organs, in no case were miliary tubercles visible in the tympanic mucous membrane. Three cases of erysipelas of the scalp were examined, each of them complicated by an extension of the inflammation into the inner (? middle) ear, of the side on which the erysipelas was most marked. The author urges the importance of attending to this point in cases of erysipelas of the head, with a view to the early evacuation of mucus or pus pent up in the tympanum. He also notices that the list includes three cases of inflammation of serous membranes and joints coincident with acute otitis. The author concludes by insisting on the propriety of regularly including the ear in *post mortem* inspections. It is to be hoped that the author will continue his researches in this direction by the routine examination of this organ, as they cannot fail to throw considerable light on the connection between ear-disease and other diseases of the body. It is also to be desired that the pathologists at our other large hospitals will see their way to following his example in this respect.

E. CRESSWELL BABER, M.B.

FISCHER AND RIEDEL ON TREPHINING OF THE ILIUM.

DR. G. FISCHER, of Hanover, has recently reported (*Deutsche Zeitschrift für Chirurgie*, Band xiii, Heft 506) a case of large psoas abscess from spinal disease, in which an opening made below Poupart's ligament had not been sufficient for a free discharge of the pus. As fluctuation could not be felt in the lumbar region, and the extremity of a long probe passed into the cavity of the abscess could not be felt under the skin, Dr. Fischer, in order to make a free counter-opening, trephined the ilium. The soft parts having been divided near the postero-superior angle of the bone, the ilium was perforated, and pus at once flowed through the opening. There was very slight reaction after this operation. The patient, whose condition was weak for a time, died ten weeks later from tuberculosis.

Two other cases of trephining of the ilium have since been published by Dr. M. Riedel, of Göttingen (*Centralblatt für Chirurgie*, No. 52, 1880).

A boy, aged 16 years, came under treatment in October 1877 in a very exhausted condition, and with an open abscess of long standing at the back of the thigh. On examination, whilst the patient was under the influence of chloroform, a long probe was passed first upwards and forwards to the upper third of the front of the thigh, and then upwards under Poupart's ligament, and along the inner surface of the ilium, until it grated against a bare and rough osseous surface at a distance of about two inches and a quarter from the postero-superior spine. As the spine and the sacro-iliac articulation seemed to be quite healthy, this patch of bare bone was regarded as the starting-point of the abscess. The ilium was trephined at this point, and vent given to some very putrid pus. Erosion of bone was found on the inner surface of the bone, but not any sequestrum. The sacro-iliac joint was found to be quite healthy, but a small fistula was observed leading upwards to the spine. The patient made a very slow recovery after this operation. After a treatment of nearly two years' duration, the patient was discharged as convalescent. The back was then straight, but there existed several open and scantily secreting fistulæ. When seen again a year later, and after he had been working in a factory, the patient presented a well-marked spinal curvature in the lumbar region. The numerous fistulæ at this time had almost all closed.

The subject of the second case—a boy, aged 15—was admitted into the Göttingen Surgical Clinic on June 14, 1880. He had fallen on the left hip about eight weeks previously, and a few days later he became feverish, and began to suffer pain at the seat of injury. When first seen by Dr. Riedel, the thigh was flexed on the pelvis at an angle of 50 deg., and some swelling could be observed in front of the hip. Two months later, in consequence of fluctuation having been made out, an incision was made into this swelling, at a point just below the antero-inferior spine of the ilium. Through this opening the finger could be passed into a cavity on the inner surface of the ilium, which cavity was surrounded by newly formed bone, and contained a small sequestrum. After unsuccessful attempts to drain the abscess by an anterior opening by the side of the rectus muscle, and a posterior opening made through the muscles on the outer side of the thigh, the ilium was trephined at the seat of the disease. This operation was followed by a free discharge of pus, and subsequently by recovery of the patient.

This operation, Dr. Riedel states, is not attended with difficulty. Severe hæmorrhage may be avoided by tearing through instead of incising the subcutaneous soft parts, and there is but slight reaction after the proceeding. The propriety of Dr. Fischer's indication for this operation is questioned by Dr. Riedel. The former surgeon would trephine the ilium, in order to obtain the best possible outlet for the purulent contents of a pelvic abscess. But when such abscess is due to vertebral disease, the best situation for a counter-opening, or an opening for drainage, is just above the crest of the ilium. In order to make an incision into the abscess in this region without any danger, the surgeon need not insist on fluctuation, but should cut down on the end of a long probe introduced, *not* below Poupart's ligament, but through a puncture made above this structure, near the antero-superior spine, the probe being then carried backwards and outwards until it can be felt under the skin of the back of the patient. The danger of wounding the peritoneum in case of no abscess existing in the lumbar region is not very great, provided the sound be introduced carefully. An incision made above the crest of the ilium at its posterior portion is regarded by Dr. Riedel as the

best means of draining a pelvic abscess consequent on vertebral disease, and far preferable to a perforation in the ilium. Trephining of the ilium, it is held, is indicated in cases of abscess dependent on disease either of the inner surface of this bone, or of the soft parts contained within the pelvis. In such cases, the operation not only affords a free outlet for pus, but it exposes to direct attack the seat of the primary disease. W. Johnson Smith.

KEY ON TUMOUR-METASTASES IN THE CENTRAL NERVOUS SYSTEM, WITH SPECIAL REFERENCE TO THE PACCHIONIAN BODIES.

The Swedish anatomists Key and Retzius showed, not long since, in a large work on the anatomy of the nervous system, that the whole cerebro-spinal system is penetrated, both in its central and its peripheral regions, by an elaborate system of communicating serous canals. Little is known concerning the circulation which takes place within this system; but it is believed that by its means molecules may pass from any one part to any other part of the nervous system. Key now points out (*Nordiskt Medicin. Arkiv*, Band xi, Heft 2-4, Nos. 15, 20, 29) that morbid fluids, infective particles, etc., may be distributed within the nervous system by means of the canals just mentioned, and may thus produce their evil effects, without at any time passing outside nerve-territory. It is in this way that the author explains the frequent obstinate recurrence and multiple appearance of certain tumours (*e.g.*, myxoma and glioma), in more or less widely separated parts of peripheral nervous territory; also their metastases from periphery to centre, and *vice versâ*. It is far easier for any fluid or morbid particle (*Seminium*) to pass into some of the serous pericerebral or perispinal cavities (especially the subarachnoid spaces) than for it to pass onward towards a peripheral destination. In these serous cavities there are pouches and *culs-de-sac*, in which such material is very apt to be retained; it may, however, pass thence through the lymph-canals in the various ramifications of the pia mater into any part of the brain, or, on the other hand, to any peripheral part of the nervous system. The author draws a parallel between the pericerebral serous spaces and the peritoneal cavity. In cases of cancer of the stomach, when the peritoneal covering has been penetrated, cancerous metastases are found to commence in the most dependent parts of the abdominal cavity, and in the various folds and pouches of the peritoneum; just in the very places, in fact, to which corpuscular particles would gravitate, and where they would be retained, after being given off at the original seat of disease into the serous fluid of the peritoneum.

The chief points of retention in the cerebro-spinal serous cavities are said by Key to be the points of exit of the cerebral and spinal nerves, the Pacchionian glands, and also, owing to their dependent position, the base of the skull and the lower end of the spinal canal. The Pacchionian bodies, which are physiological structures, serve, according to Key and Retzius, to permit the passage of fluid from the cerebro-spinal serous cavities into those veins and sinuses of the dura mater around which they are grouped. If this view be correct, it is evident that they are specially likely places for the retention of any corpuscular contents of the cerebro-spinal fluid. The author's researches show, moreover, that these organs are much more widely distributed than has been supposed. Their great frequency at the base of the skull, and especially in the middle fossa, would lead, *à priori*, to the conclusion that this would be a favourable situation for the retention of tumour-cells. As a proof of the truth of this view, Key relates in great detail a case of fibro-cellular neuroma of the auditory nerve, with numerous metastases in the Pacchionian bodies on both sides of the superior longitudinal sinus, and also at the base of the skull, especially in the left middle fossa. The swollen glands had, in several places, caused loss of substance in the bone, similar to what frequently occurs in glioma of the retina. Great attention is devoted by the author to this last-named affection; he draws attention to cases of it in which metastases were found in the brain, etc. He endeavours to show that the various metastases found in this disease (most frequently on the surface of the brain, but also in its substance, in the ventricular walls, and once certainly in the spinal cord) are not to be regarded as the expression of a general infection, but as local metastases in the serous canals of the nervous system. He regards the secondary implication of the other eye as a metastasis of the same kind. Cases given by the author also illustrate the tendency to stasis at the points of exit of cerebral, and more especially of spinal, nerves. The occurrence of tumours on the outer surface of the skull is explained by Key, as being due to the perforations caused by the enlarged Pacchionian bodies; this most frequently happens in the temporal region, but is also seen at the parietal eminences and in the forehead. In certain cases, parts of the peripheral nerves have also apparently been affected, but this is not yet certainly ascertained.

C. S. W. Cobbold, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. Israel.—The Cure of Malignant Lymphoma by Arsenic. (*Berl. Klin. Woch.*, No. 22, 1880.)
2. Von Kaczorowski.—Five Cases of Transfusion of Blood into the Peritoneal Cavity. (*Wiener Med. Woch.*, No. 46, 1880.)
3. Schaefer.—Extract of Calabar Bean in Atony of the Intestines. (*Berl. Klin. Woch.*, No. 51, 1880.)
4. Gamir.—On the Treatment of Acute Blennorrhœa with Chlorate of Potash. (*El Siglo Medico*, Oct. 1880.)
5. Meldon.—On the Intravenous Injection of Milk. (*Brit. Med. Jour.*, Feb. 1881, p. 228.)
6. McReddie, G. M.—On the Hypodermic use of Chloral in Cholera. (*Brit. Med. Jour.*, Feb. 1881, p. 229.)
7. Charteris, Matthew.—On the Comparative Value of Salicin and Salicylate of Soda in Acute Rheumatism. (*Brit. Med. Jour.*, Feb. 1881, p. 229.)
8. Latham.—On the Chemical Aspect of Sudden Death by Chloroform. (*Lancet*, Feb. 1881, p. 216.)
9. Battye.—On Silica as an Anodyne in Cancer. (*Lancet*, Jan. 1881, p. 122.)
10. Allbutt, H. A.—On Chian Turpentine in Cancer. (*Lancet*, Jan. 1881, p. 155.)
11. Neale, Richard.—On Allbutt's Case of Chian Turpentine in Cancer. (*Ibid.*, Feb. 1881, p. 238.)
12. Fogerty and others.—On the Non-Ecbolic Powers of Quinine. (*Lancet*, Jan. 1881, p. 162.)
13. Neale, R.—On a Ready Method of Applying Hot Fomentations. (*Brit. Med. Jour.*, Jan. 1881, p. 158.)

14. RICHARDSON, B. W.— On Ethylate of Sodium in the Treatment of Nævus. (*Lancet*, Jan. 1881, p. 168.)

15. BURMAN, C. C.—On Calabar Bean in Traumatic Tetanus. (*Lancet*, Jan. 1881, p. 172.)

16. LOTHROP.—On Cannabis Indica in Migraine. (*Buffalo Med. and Surg. Rep.*, Dec. 1880.)

17. LAX, E.—On the Treatment of Diphtheria with Muriate of Pilocarpin. (*Aertz. Intel. Blatt*, 1880, No. 43; *Allg. Med. Cent.-Zeit.*, 1880, No. 87.)

18. BERTET.—On the Treatment of Albuminuria by Fuchsine. (*Thèse de Thérap.*, Paris, Aug. 1880.)

19. TAULEIGNE.—On the Treatment of Bronchitis and Pleurisy by Pilocarpin. (*Thèse de Thérap.*, Paris, Aug. 1880.)

20. MACKENZIE.—On Iodoform in Pruritus Vulvæ. (*New York Med. Jour.*, Oct.)

21. THOMSON, J. W.—Olive-Oil as a Solvent of Gall-Stones. (*Gaillard's Med. Jour.*, Dec. 1880.)

22. BOUCHARDAT.—On the Hygienic Treatment of Biliary Calculi. (*Bull. de Thérap.*, Aug. 1880.)

23. CALDWELL.—On Coca as a Therapeutic Agent. (*Detroit Therap. Gaz. and Monthly Mag. of Pharmacy*, March, 1881.)

24. Infusion of Clover in Cancer. (*Med. News and Pharm. Jour.*, Feb. 26, 1881.)

25. Pinckneya Pubens as an Antiperiodic. (*Med. News and Pharm. Jour.*)

26. DUTTA, BABU RAM CHUNDRA.—On Holarrhena Antidysenterica as an Antiperiodic. (*Calcutta Med. News and Pharm. Jour.*, Feb. 1881.)

27. MICHAILOW.—On the Treatment of Dysentery with Enemata of Cold Water and Finely Crushed Ice. (*Mediz. Obosr.*, vol. viv.)

28. STEFFEN.—The Treatment of Typhus in Children. (*Jahr. für Kinder.*, N. S., Band xv, Heft 3 and 4.)

29. BARTHOLOW, R. — The Antagonism between Opium and Belladonna. (*New York Med. Rec.*, Nov. 27, 1880.)

30. WILSON, AUGUSTUS H.—Soluble Compressed Pellets, a new form of Remedies for Hypodermic use. (Reprint from the *Philadelphia Med. Times*, Jan. 1, 1880.)

31. WARFVINGE. — On Arsenic in Pseudoleukæmia. (*Nord. Med. Arkiv.*, Band xii, Häft 4.)

32. KOEBNER, DR.—Cure of Lichen Ruber by Hypodermic Injections of Arsenic. (*Berl. Klin. Woch.*, Dec. 13, 1880.)

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1. *Israel on the Cure of Malignant Lymphoma by Arsenic.*—This case, presented by Dr. Israel (*Berl. Klin. Woch.*, 1880, No. 22) before the Berlin Medical Society, was a female aged 65 years, whose cure had already lasted five months. From Jan. 1879 to Feb. 1880, numerous glandular swellings had developed in various regions of the patient's body, in the throat, on the neck, over the clavicles, in the axillæ; in consequence of which general debility and a cachectic condition supervened. The treatment lasted from Feb. 18th 1880 to April 4th, during which time she took steadily a mixture containing one part of Fowler's solution to four parts of the tincture of malate of iron. At first she took of this ten drops three times daily, gradually increasing in four weeks to thirty drops three times daily. This maximum was continued for eleven days, and then gradually diminished. At the same time about an eighth of the amount of Fowler's solutions, taken inwardly each day, was injected subcutaneously with an equal quantity of distilled water into one of the various glandular tumours. At first the tumours increased, but, from the third week onwards, they improved markedly, and in nine weeks the cure was complete. There was no redness, abscess, or fever during the treatment, but the pulse rose to 140, and retained this frequency throughout. The patient had previously been seen by Professor Langenbeck, who diagnosed lymphosarcoma with a very unfavourable prognosis.

2. *Von Kaczorowski on Five Cases of Transfusion of Blood into the Peritoneal Cavity.*—The cases (*Wiener Mediz. Woch.*, No. 46) were one of each of the following: Puerperal fever, great anæmia with hysteria, phthisis, marked anæmia in a woman with fungous cervical ulcers and bronchitis, and a case of typhus fever in a female drunkard. In each of these cases, transfusion into the peritoneal cavity, according to Ponfick's method, previously described in these columns, benefited the patient, and in no case did unpleasant complications arise. One of the manual advantages of this simple mode of transfusion seems to be that little surgical dexterity is required for its performance, while it does not appear to have the inherent risks of the venous method. With antiseptic precautions, a trocar is passed through the abdominal wall in the linea alba, and, by means of a tube provided with a glass funnel, the defibrinated blood is poured through the cannula into the abdomen. The researches of Bizzozero and Golgi, reported in the LONDON MEDICAL RECORD, have demonstrated the sound physiological basis of 'peritoneal transfusion'.

3. *Schaefer on Extract of Calabar Bean in Atony of the Intestines.*—From experiments on animals, which showed powerful action of the muscular coat of the intestine under this drug, the author (*Berl. Klin. Woch.*, No. 51) has prescribed it with excellent results in five cases of obstinate intestinal atony with constipation and flatulence. The dose was about 1-45th of a grain in glycerine, three times daily.

JAMES ANDERSON, M.D.

4. *Gamir on Chlorate of Potash in Acute Blennorrhagia.*—Dr. Gamir (*El Siglo Medico*, October 1880) of Havana reports four cases of acute gonorrhœa, which he treated with chlorate of potash. The average duration of treatment was ten days in each case, and the salt was prescribed in doses of from 10 to 20 grammes daily. LITTON FORBES.

5. *Meldon on the Intravenous Injection of Milk.*—In the LONDON MEDICAL RECORD, May 1880, p. 187, will be found the report of Dr. Meldon's early cases, in which he transfused milk with the effect of curing four out of ten moribund cases and prolonging life in the others. In the *Brit. Med. Journ.*, Feb. 1881, p. 228, he states that he has now performed the operation twenty times. Twelve were cases of phthisis, in which the patient was moribund; in every instance life was prolonged, but the general feeling left upon his mind was one of disappointment at the very temporary improvement; and, beyond prolonging life for a few months, Dr. Meldon does not, in phthisis, anticipate great results. Four cases of pernicious anæmia were cured. Two cases of exhaustion from hæmorrhage were cured. Two were cases of exhaustion from typhoid fever, one of which recovered. To prevent the possibility of the milk being at all acid, ten grains of carbonate of ammonia are added to six ounces of goat's milk, if it be possible to obtain this, because the animal can be brought nearer to the patient, and the milk be transfused in a fresher condition than from any other source.

6. *McReddie on the Hypodermic Use of Chloral in Cholera.*—Dr. G. M. McReddie testifies, in the *Brit. Med. Journ.*, Feb. 1881, p. 229, to the great value of treating choleraic collapse with hypodermic injections of chloral. In adults, six grains of chloral are given with each injection; in children, one to three grains. The deaths in cases thus treated,

were thirty-five per cent, against sixty-four per cent. by other means. [In the London Medical Record, Nov. 1878, p. 481, a full report of the use of chloral hypodermically may be consulted with interest.]

7. *Charteris on the Comparative Value of Salicin and Salicylate of Soda in Acute Rheumatism.*—Dr. Matthew Charteris, after an experience of eighty cases, strongly urges the profession, in the *Brit. Med. Journ.*, Feb. 1881, p. 229, not to sacrifice salicin for the use of the salicylate of soda. In his own practice, he never exposes his patient to the risk of the toxic action of the salicylate when he possesses so safe and certain a remedy in salicin itself.

8. *Latham on the Chemical Aspect of Sudden Death by Chloroform.*—Dr. Latham, in the *Lancet*, Feb. 1881, p. 216, explains, chemically, why death occurs so suddenly in some cases under the influence of chloroform. Hoffman showed that, by means of chloroform, the amides of the vital fluids are converted into isocyanides. If, then, in a person whose co-ordinating chemical centre is in a feeble state, blood, charged with chloroform, pass from the lungs to the heart, and at once, though the coronary arteries, come into contact with the muscular tissue, one constituent of the muscle will be decomposed, and the transformed tissue will no longer respond to the nervous stimulus, but become a mere bag, into the right side of which the blood, from the pressure in the veins, will flow, and the patient will die with distended heart.

9. *Battye on Silica as an Anodyne in Cancer.*—Dr. J. H. Battye again claims, in the *Lancet*, Jan. 1881, p. 122, a high place in the treatment of cancer for silica. Dr. Battye has previously brought the remedy before the profession in the *Lancet*, May 1880, pp. 696, 742. On Dec. 5th, 1880, Mrs. S., who had suffered for months from malignant disease of the womb, came under Dr. Battye's care. Her condition was one of great mental distress and bodily anguish. She had had no sleep of more than ten minutes' duration for three weeks, and was never free of pain when awake. One grain of silica, in the form of lozenge, was given three times a day. On Nov. 8th the pain was much less, and she slept for twenty minutes at a time. On Nov. 11th she was moving about the house, comparatively cheerful, and able to read with enjoyment. The pain was quite 'bearable' and not constant. The sleep was fairly good. The report, on Nov. 20th, was to the effect that there was no real pain, only an uncomfortable feeling about the lower part of the body.

10. *Allbutt on Chian Turpentine in Cancer.*—In the *Lancet*, Jan. 1880, p. 155, Mr. H. A. Allbutt of Leeds reports a case of fungoid medullary cancer in a lady, aged 54, affecting the right side of her face and neck. It had begun to break down. The right side of the face was œdematous, the eyelids so swollen as to obliterate vision. All the lymphatics of the neck, thorax, and right arm were thoroughly infiltrated. The general health was quite broken down, sleep and appetite were bad, the pain in the neck was great, and she suffered from palpitations and dyspnœa. Mr. John Clay's five-grain pill of Chian turpentine was given thrice a day, after meals. After three weeks, two pills were given at each dose; also a mixture containing three minims of liquor strychniæ, with five minims of perchloride of iron twice daily. The general health so improved as to make her feel quite strong, she ate well, slept part of the night, lost the palpitations and dyspnœa, and, most remarkable and pleasing of all, the pains left her never to return. 'I am persuaded', says Mr. Allbutt, 'that life was prolonged, and her sufferings relieved, by the use of chian turpentine. Had the disease been treated earlier, by the above method, there would probably have been no return of the disease.'

11. *Neale on Allbutt's Case of Chian Turpentine in Cancer.*—Dr. Richard Neale, in the *Lancet*, Feb. 1881, p. 238, calls in question the conclusions arrived at by Dr. Allbutt, and would rather attribute the improvement to the effects of the strychnine and iron, pressure upon some sensitive nerves being coincidentally removed by the spread of the ulceration. This explanation, however, Dr. Allbutt repudiates.

12. *Fogerty and others on the Non-Ecbolic Powers of Quinine.*—In the *Lancet*, Jan. 1881, p. 162, Dr. Fogerty and Mr. Lincoln, both at present practising in India, confirm the statements of Dr. Richard Neale (*vide* the London Medical Record, May 1880) that quinine does not produce premature labour. Both gentlemen report cases in which the drug was largely given at different periods of pregnancy, with the effect of curing attacks of ague without in any way interfering with the course of gestation.

13. *Neale on a Ready Mode of Applying Hot Fomentations.*—Dr. Richard Neale, in the *Brit. Med. Jour.*, Jan. 1881, p. 158, records an easy method to obtain hot flannels, of which a patient informed him, viz., by placing the flannels in the steamer of an ordinary potato steam-kettle; thus avoiding all trouble, together with risk of scalding the hands in the process of wringing the flannel sufficiently dry.

14. *Richardson on the Ethylate of Sodium in the Treatment of Nævus.*—Dr. B. W. Richardson records, in the *Lancet*, Jan. 1881, p. 168, his latest experiences of the use of the ethylate of sodium, which he prefers to the ethylate of potassium, in the treatment of nævi. Several very severe cases are reported, in all of which a complete cure eventually resulted. One very important point in the treatment is to allow the dry crust to fall off itself, and never to use force to remove it, nor to allow a poultice to be applied to hasten the removal; for, if this be done, the scab becomes putrid and septicæmia may arise, a result that actually followed in one case, although in a very slight degree.

15. *Burman on Calabar Bean in Traumatic Tetanus.*—Mr. C. C. Burman, in the *Lancet*, Jan. 1881, p. 172, gives the history of a boy, aged 11 years, who, on Sept. 8, met with a severe lacerated wound on the heel. On Sept. 17th he began to complain of a stiff neck, and on the 21st the first convulsion was developed. Many remedies were used, such as chloral, belladonna, morphia, ice to the spine, etc., without avail, and on the 29th Calabar bean lamels, as prepared by Messrs. Savory and Moore, containing the one-sixtieth of a grain of extract, were inserted between the clenched teeth every four hours. On Oct. 3rd there was a decided improvement, which continued so that on the 7th food could be taken, and the lad made an uninterrupted recovery. Richard Neale, M.D.

16. *Lothrop on Cannabis Indica in Migraine.*—Dr. Lothrop, in a paper read before the Buffalo Medical Club, advocates anew the administration of this drug in persistent hemicrania (*Buffalo Med. and Surg. Rep.*, Dec. 1880.) After a short review of the subject, in which reference is made to an excellent article by Dr. Seguin (*New York Med. Rec.*, vol. xii, p. 774), the writer explains the principle of treatment as laid down by Greene. This was 'to maintain, by

the use of small doses of the agent, a constant influence upon the nervous system for a long time, the same as is required in epilepsy by the use of the bromides'. It is stated as a matter of course, that at first no appreciable effect is observed, and that not until the use of the remedy is persevered in for many weeks, and the nervous system kept under its influence for a considerable time, will the patient find an appreciable diminution in the severity and frequency of the attacks. It is well to commence with one-fourth of a grain of the extract before each meal, for the first fortnight. The dose may be increased to the third of a grain for the second fortnight, to be augmented to a half-grain at the end of four weeks. This amount will generally be sufficient, and should be continued for several months. Success here is only attained by persevering effort. A severe case of hemicrania, in which hereditary influences bore a prominent part, is described by Lothrop in support of these views on the efficacy of the prolonged use of cannabis Indica.

17. *Lax on the Treatment of Diphtheria with Muriate of Pilocarpin.*—Lax, following Guttmann, has employed muriate of pilocarpin in a small epidemic of diphtheria, and has obtained results so far beyond his most favourable anticipation, that he thinks himself obliged to recommend it most earnestly for wider use. Between Sept. 24 and Nov. 17, he treated for diphtheria sixteen children of various ages, from one to 16 years. The first six children were treated by pencilling with a 4 per cent. solution of nitrate of silver, and a solution of chlorate of potash as a gargle. To two quite young children, a mixture of chlorate of potash was given. Of the six children, four recovered quickly, while two, whose cases were very severe, died. In the last ten cases occurring after Oct. 5, Lax employed exclusively the muriate of pilocarpin. Six of these were very severe, and in two of them death was expected every night. Nevertheless, all these children treated with pilocarpin entirely recovered. An increased secretion of mucus and saliva occurred, and great masses of diphtheritic effusion were expelled from the mouth as well as the nose. The breathing became freer, *râles* ceased to be heard, the fever passed away, and the appetite recovered. The children generally recovered in from three to five days. Labial herpes indicated the favourable processes in all cases. On the third day already all trace of the deposit on the soft palate and tonsils was removed. According to the age, Lax prescribed two to four centigrammes of muriate of pilocarpin, 60 to 80 centigrammes of pepsin, with two to three drops of hydrochloric acid in 70 grammes distilled water, giving every hour from one teaspoonful to one tablespoonful. In addition, Tokay wine was given hourly (a teaspoonful to a tablespoonful), and warm packs were applied to the neck.

18. *Bertet on the Treatment of Albuminuria by Fuchsine.*—This subject has been investigated with various results. Bergeron and Clouet, in 1876, asserted that the use of fuchsine in an albuminuric subjects led to the complete disappearance of albumen from the urine. In January 1879, M. Bouchut published, in the *Gaz. des Hôpitaux*, six cases of cure of albuminuria, with or without anasarca (but in these cases the patients were put on milk-diet also, which is in itself a powerful therapeutic means). Dr. L. Devet publishes sixteen cases favourable to the treatment by fuchsine. We have already given in the LONDON MEDICAL RECORD (Feb. 15, 1881, p. 54) the observations of English physicians on the subject. Bertet, after discussing the whole question at length, publishes four cases in which he gave fuchsine in small doses, 10 to 15 centigrammes a day, in pills. The result is very hostile to the use of the remedy, since the albumen did not begin to disappear until after the patient was put upon milk-diet, and the fuchsine diminished or left off. From these observations, fuchsine would appear not to have any therapeutic action.

19. *Tauleigne on the Treatment of Bronchitis and Pleurisy by Pilocarpin.*—M. Vulpian having arrived at the conclusion that catarrhal inflammation of the respiratory tubes, and inflammation of the serous membranes in their first stage, are those in which jaborandi or its alkaloid pilocarpin have the most incontestable use, M. Tauleigne states, in his graduation thesis on the subject, that he has employed them in a series of cases, of which he relates fifteen. The effect of jaborandi or pilocarpin is most prompt, and its success most evident, at the outset of the disease. A single infusion of 4 grammes (one drachm) of leaves of jaborandi is often enough to get rid of the affection ; and M. Vulpian cites a case of well-marked pleurisy in a child, aged 10 years, which, treated from the outset, yielded to the action of pilocarpin in two days. Much less is to be expected from its use in long-standing cases. The author relates from his observation of pleuritic effusion without fever or inflammation in which jaborandi has given good results, one case in which considerable effusion had for a month resisted the use of tincture of iodine, eight large blisters, and diuretics, and yielded in seven days to two doses of jaborandi. The fluid once absorbed, and pleuritic rubbing having been noted, jaborandi becomes useless. Recourse must then be had to tonics, and the application of tincture of iodine. Pilocarpin is indicated in the various forms of bronchitis. The author relates a remarkable case of chronic bronchitis, which had persisted during four years, with continued cough, difficulty of breathing, and suffocation, which recovered after the administration of two draughts containing 4 centigrammes of nitrate of pilocarpin. As to the mode of administration he recommends the hypodermic injection of the nitrate of pilocarpin, in doses of 1 centigramme. The patient should be fasting, without which the medicine is apt to provoke nausea and vomiting, as soon as sweating is established. In constipated subjects it acts badly, and it is necessary to give a preliminary purge.

20. *Mackenzie on Iodoform in Pruritus Vulvæ.*—At a recent meeting of the New York Obstetrical Society (*New York Med. Journ.*, Oct. 1880), Dr. Mackenzie remarked that the plan of treatment which, in his hands, had yielded the best results was a local application of an ethereal solution of iodoform in the form of a spray. It produced no pain, and was very rapid in its action. Dr. Warren also had used iodoform in an ointment in these cases, and with more satisfactory results than from anything else he had tried.

21. *Thomson on Olive-Oil in the Treatment of Gall-Stones.*—Dr. J.W. Thomson (*Gaillard's Med. Journ.*, Dec. 1880) relates the case of a patient, aged 38, who had suffered with paroxysms of severe pain at intervals since January last, beginning over the region of the gall-bladder, and radiating through the epigastric region up to the right side to the shoulder joint. Her stomach had often rejected everything taken into it, and the stools meantime were very light coloured. There was great tenderness over the right lobe of the liver, especially over the region of

the gall-bladder and epigastrium. Recently there was an icteric skin and conjunctiva. A perusal of an article by Dr. R. Kennedy of Kingston, Canada, (*Lancet*, Sept. 18, 1880) led to the trial of six ounces of olive-oil to be taken at bed time. But when the patient had taken about two-thirds of the dose, she vomited. A tablespoonful was then ordered to be taken every two hours, until six ounces had been taken, to be followed in a few hours by seidlitz powder, the patient being unable to retain castor oil. With the first action from the bowels, which was free, there was an immense number of gall-stones from the size of a millet-seed to that of a buckshot, most of them appearing to be soft and in a state of dissolution. As a precautionary measure, the sweet oil was repeated in a few days, followed as before with seidlitz powder. The lady, since the evacuation of the gall-stones, rapidly recovered her wonted health. Her digestion is excellent, and she eats freely of any kind of nourishing food, and has gained 12 lbs. in weight. But whether olive-oil be a solvent of gall-stones or not, certain it is it brings them away, and relieves the sufferer from pain and death. To have discovered a remedy (?) for this painful malady, Dr. Thomson regards as a great achievement, and its very harmlessness and simplicity rather add to the value of the discovery. By means of the simple remedy which he recommends, we may, in his opinion, now not only relieve with promptness the most intense suffering, but we may save the lives of many sufferers.

22. *Bouchardat on the Hygienic Treatment of Biliary Calculi.*—Professor Bouchardat, who is the leading authority in France on medical dietetics, recommends (*Bull. de Thér.*, Aug. 1880), for the treatment of biliary calculi, that the patient should abstain from bread, cereals, eggs, and nitrogenous food in excess; sorrel, tomatoes, strong liquors, shell fish, and cheese; that he should eat ordinary vegetables, preferring those rich in potash to those which are rich in soda. He should also employ an indirect alkaline treatment in the form of malates and citrates, as they are contained in fruits, and drink light red wine diluted with water. He should keep the bowels free by taking every morning a teaspoonful of tartrate of potash and soda and sulphate of soda in equal parts. He should take moderate exercise. The action of the skin should be stimulated by washing, frequent friction, and shampooing by the hand moistened with a few drops of perfumed oil. Every week from one to three baths should be taken, each bath containing 100 grammes of carbonate of potash, 2 grammes of essence of lavender, and 5 grammes of tincture of benzoin, followed by lengthened friction and shampooing. With the object of the expulsion of the calculi, the patient should take, night and morning, one to three *perles* of essence of turpentine, and one or two *perles* of ether. They may be taken with the meals, but in preference between them. To prevent the formation of calculi, the patient should take for ten days, night and morning, before each repast, a pill containing one decigramme (1½ grain) of tartrate of potash and lithia; for ten subsequent days he should take full doses of acetate of potash, with a light aperient night and morning; for ten subsequent days, every day, a pint and a half of water containing tartrate of potash and soda. During the spring, on rising in the morning, he should take, for a month, 120 grammes of the juice of lettuce, chicory, and dandelion, equal parts, with five grammes of acetate of potash. He should spend a season at Pougues, Vals, or Vichy.

23. *Caldwell on Coca as a Therapeutic Agent.*—Dr. Caldwell of Baltimore has been making some experiments on coca as a therapeutic agent, which are recorded in the *Detroit Therap. Gazette.* He admits that the preparation of the leaves, which is known as 'coca erythroxylon', has manifested certain virtues in neuro asthenia, hysteria, opium-habit, dipsomania, alcoholism, etc. In the author's opinion, coca is a safe and reliable nerve-tonic, acting rapidly as a diffusive stimulant, leaving no unpleasant results. Dr. Caldwell also finds that it acts energetically as an aphrodisiac—an important fact that was not known before. Besides this, he claims for it universal application as a restorer of vital force, and an arrester of destructive metamorphosis. The preparations he has used are the tincture, elixir, and fluid extract; the dose of the latter is one tablespoonful, well diluted. The author has himself taken somewhat large doses, 'producing', he says, 'for half an hour or more, exhilarating influences on the brain much like that of ether or amyl-nitrite'. This, it appears, soon passes away, leaving the system in a state of quietude for several hours, without any special desire for more; it thus differs from other nerve-stimulants. The author states that he has also administered it with some success in torpid digestion (one teaspoonful before dinner, and one at bed-time, in a glass of water), and in many cases of gastric debility, influenza, slight colds, and especially in irritable coughs in consumptive patients, giving decided relief at night. Dr. Caldwell is, therefore, of opinion that it would prove useful in phthisis; but the editor of the *Monthly Mag. of Pharm.*, March 1881, thinks that nothing can be known with certainty about its therapeutic action until its active principle, the alkaloid cocain, is more thoroughly investigated.

24. *Infusion of Clover in Cancer.*—Another supposed remedy for cancer has recently cropped up; but the news seems too good to be true, since the remedy is within the reach of all, and, except in whooping-cough, has no repute as a medicine. The remedy in question consists of an infusion made from the blossoms of red clover, which is made like ordinary tea, and taken to the extent of about a quart daily, before meals and at bed-time. A writer in the *Med. News* speaks of it thus: 'The clover tea has done wonders for us; my appetite is now good; my general health greatly improved, and the wound is healing.'

25. *Pinckneya Pubens as an Antiperiodic.*—In the *New York Times* of Jan. 15th (*Med. News, and Pharm. Jour.*, Feb. 26th), attention is called to the 'Georgia Bark' tree, *Pinckneya pubens*, Mich., a cinchonaceous plant found on river banks and in swampy localities from South Carolina to Florida. It is a beautiful tree, twenty feet or more in height, with large, ovate, acute, opposite, leaves, and downy cymes of purple flowers which are radiant by the expansion of a calyx segment of the marginal flowers. Michaux reported the bark to be useful in intermittent fever, and his statement has since been corroborated by Dr. Law, of Georgia, and Dr. Fauntleroi, of Virginia. Cinchonine is said to have been detected in it, but the action of the bark is stated to be too slow to act as a substitute for quinine. It has the property, however, of usually producing diaphoresis. The bark is given in doses of one drachm, in the form of a powder or decoction.

26. *Dutta on Holarrhena Antidysenterica.*—The

bark of *Holarrhena antidysenterica*, R. Br., has long enjoyed considerable repute in India as a tonic and febrifuge, and especially as a remedy in dysenteric affections. It was formerly imported into Europe under the names of 'conessi bark', 'codaga pala', 'cortede pala', and 'Tellicherry bark'. In 1858, an alkaloid was separated from it by Mr. Haines, and seven years afterwards the late Dr. Stenhouse again described the alkaloid under the name of 'conessine'. The discovery, however, does not appear to have led to any results. Recently this alkaloid appears to have been again re-discovered by an Indian chemist, Babu Ram Chundra Dutta (*Calcutta Med. News*), and described by him under the name of 'kurchicine', from a native name of the drug, and there appears to be some probability now that it will be utilised in medicine. Kurchicine is said to be white, non-crystalline, and very bitter to the taste. It is readily soluble in alcohol, ether and dilute acids, less soluble in chloroform and benzine. From acid solutions it is precipitated by soda, ammonia, and potash. A crystalline acetate and tartrate have been obtained. The bark examined yielded about three per cent. of the alkaloid. It has been prescribed in the form of powder, in doses of from two to five grains, and as a solution of the strength of two grains to an ounce of water, the alkaloid being first dissolved in a little acetic acid. It is reported to have proved in no way inferior to the cinchona alkaloids as an antiperiodic, and not to produce nausea, vomiting, or headache. The same alkaloid was found to be present also in the seeds.

27. *Michailow on the Treatment of Dysentery with Enemata of Cold Water and finely crushed Ice.*—After trying various methods of treatment, the author (*Mediz. Obosr.*, Vol. xiv, Aug. 1880) has ended at last at which, he says, has not failed him in a single case for four years. It proved especially successful in the cases of his own children. A short description of two cases follows. Quinine, in the form of Botkin's cholera-drops, was administered internally in all cases. (Compound tincture of quinine, Hoffmann's anodyne spirit, of each half an ounce; hydrochlorate of quinine, one scruple; dilute hydrochloric acid, half a drachm; tincture of opium, half a drachm; peppermint-oil, fifteen drops). The diet consisted of *bouillon*, milk, and eggs; the drink was cold water and red wine. The enemata were made in the following manner. Ice was crushed to paste; from this mass of ice two glasses were taken for grown-up men for every enema; for children, according to age, beginning with half a glassful, and so on. Water was then added while the ice floated. It was then poured into a glass funnel connected with a long tube. This funnel, fixed on a stand, remained near the sick bed; in other words, the apparatus remained in action until the mass of ice melted and flowed slowly into the rectum, which process lasted about one or one and a half hours. The enemata were employed every two hours, then every three and four hours; finally, twice or three times daily. The author succeeded in all cases in curing the disease in eight or ten days.

28. *Steffen on the Treatment of Fever in Children.*—In order to diminish fever, M. Steffen (*Jahr. für Kinder.*, N. S., Band xv, Heft 3 and 4), has made comparative experiments on the effect of cold baths and salicylate of soda. In all, 148 cases of abdominal typhus (enteric fever) and 30 of exanthematous typhus were treated. Of typhus abdominalis, 48 cases were treated with baths. The latter had at first a temperature of 15 to 20 deg. R. (65.75 to 77 deg. Fah.); but, as the patients could not bear them well, the temperature was in most cases raised to 28 deg. R. (95 Fah.), and was cooled down to 20 deg. R. In some cases of severe fever, sulphate of quinine, in doses of half a gramme (7½ grains), was given in the evening. Several tables are given showing the age of the patient, the day of disappearance of the fever, and the number of baths used in each case. The effect of the baths on the temperature, pulse, and respiration is described minutely. Out of forty-eight cases five proved fatal. The author is of opinion that the treatment with cold baths promotes the occurrence of inflammatory processes in the respiratory organs. Contra-indications against the applications of baths, are the frequent reluctance of patients to take them, and collapse, often relieved only with difficulty. Salicylate of soda was employed only when the temperature was above 39.0 deg. C. (102.2 Fah.). In children of very early age, half a gramme or less was given; to older ones, as a rule, one gramme; rarely two grammes. The tables show here, in the place of baths, the doses of salicylate of soda. Whilst the temperature sank in the baths, on an average, from 0.6 deg. to 1.5 deg. (Cent.), the differences in the majority of cases are here marked about 2.0 deg. (Cent.) It is characteristic of salicylate of soda, that the effect is not so sudden as with cold baths. The highest point in the difference before and after the remedy occurred only after from four to seven hours. On the other hand, the reduction in the temperature lasted longer than in cold baths, and rose then gradually. In these, as well as in the first forty-eight cases, the sudden cessation of fever differs from what was expected. The conditions of pulse and respiration were the same as with treatment with water. Out of 100 patients, six died. The following secondary effects of the use of salicylate of soda were not of evil consequence, and disappeared soon after the employment of the medicine ceased: dryness and burning in the mouth (the medicine should, therefore, be diluted in at least half a glassful of sugared water), vomiting, ringing in the ears and difficulty in hearing, delirium, more or less profuse sweating, erythema of the hands and feet, transudation into the subcutaneous cellular tissue, in one case into the serous cavities, sudden collapse, which, however, can be avoided by precaution (too large doses should not be given at too short intervals, and the remedy should not be applied too long). The author has not observed an irritated state of the mucous membrane, but increased diuresis. Twenty cases of exanthematic typhus were treated with cold baths, six with salicylate of soda. The results did not differ from the above.

29. *Bartholow on the Antagonism between Opium and Belladonna.*—Dr. Roberts Bartholow, in his Cartwright Lectures (*New York Med. Rec.*, Nov. 27, 1880), discusses the antagonism between opium and belladonna, and submits the following conclusions. 1. Morphia and atropia are antagonistic in their effects on the cerebrum, and the result of the antagonism is to induce torpor; but this deepens into coma, if the quantity used be larger, and hence the antagonism does not extend to lethal doses. 2. They are antagonistic in their action on the pupil, though this is not constant, and the effect of the atropia preponderates. 3. They are antagonistic in their action on the heart, but the effect of the atropia is more powerful, and more prolonged. 4. They are antagonistic in their action on respiration; morphia retarding the respiratory movements, and diminishing the excretion of carbonic acid, and atropia increas-

ing the respiratory movements, and the excretion of carbonic acid. 5. They are antagonistic in their action on arterial tension; opium retarding the heart and paralysing the arterioles, and atropia counteracting these effects. 6. Atropia prevents to a large extent, and often completely, the depression, coldness of the surface, cold sweating, and cerebral nausea caused by morphia. 7. Morphia and atropia are antagonistic in their action on the kidneys, the one diminishing, and the other increasing the urinary discharge. 8. They differ also in their action on the bladder, the one diminishing the sensibility of the mucous membrane and impairing the vigour of the muscular coat of the viscus, and the other stimulating the sphincter; they are not, therefore, antagonistic in their effect on the bladder. 9. In therapeutics, these antagonistic actions may be utilised to secure effects which cannot be obtained by the employment of either agent alone.

30. *Wilson on Soluble Compressed Pellets.*—Solutions for hypodermic use are being generally abandoned, because the penicillum which forms renders them uncertain in their action, and because of the danger and inconvenience of carrying them about. Dr. Wilson (reprint from the *Phil. Med. Times*, Jan. 1, 1880) proposes a new form of soluble compressed pellets which are convenient to use, and certain in their action. He has so far confined his experiments to the salts of morphia, because it is the drug most commonly used hypodermically. When the morphia salts are compressed alone they become extremely hard, and dissolve with difficulty. When, however, they are mixed with a small quantity of common salt before compression, this difficulty is overcome. The chloride of sodium acts as a disintegrator, and facilitates the solution of the morphia in water. The salt causes neither pain nor irritation, and assists in promoting absorption. The time required to dissolve the pellet is about half a minute. The hypodermic syringe is filled with twenty minims of water, which is emptied into a teaspoon, and the pellet being then dropped in is crushed with the end of the syringe, and after all the lumps are broken up, the solution is drawn up, and forced out three or four times, when usually the whole mass will be entirely dissolved, and ready for use. The muriate is found to be the best salt to combine with the chloride of sodium. No difficulty is experienced in obtaining morphia and atropia in the same pellet, and the following formula is recommended: ℞. morphiæ hydrochloratis, ¼ gr.; atropiæ sulphatis, 1-150 gr.; sodii chloridi, ¼ gr. Mix, and make into a compressed pill. The advantages claimed for this method are: 1. The convenient size of the pellets; 2. They may be used for administration by mouth; 3. The certainty of the contents and dose. 4. The rapidity of their action. [The method presents no great novelty. Savory and Moore's lamels and discs for hypodermic use are well known and largely used in this country.—*Rep.*] WILLIAM MURRELL, M.D.

31. *Warfvinge on Arsenic in Pseudoleukæmia.*—Dr. F. W. Warfvinge relates in *Hygeia* for 1880 (*Nord. Med. Arkiv*, Band xii, Häft 4), four cases of pseudoleukæmia, principally with the object of shewing that treatment by arsenic has a decidedly favourable effect. The first patient, a man aged 56, had enlarged lymphatic glands in the neck, groins, and axillæ, varying in size from a walnut to a hazel-nut; splenic dulness was 11 centimètres (4.3 inches) long by 10 centimètres (4 inches) wide. There were 3,220,000 red blood-corpuscles in a cubic millimètre; the white corpuscles were in the proportion of 1 to 140 red. Solution of arsenite of potash was given in two-drop doses twice daily; it was not tolerated at first, but, after a catarrh of the digestive and respiratory organs had disappeared, it was again taken without any inconvenience. Under the use of this medicine, a marked improvement shewed itself; the lymphatic glands and the spleen diminished, and, after the arsenic had been taken (always in the dose above mentioned) for five weeks, the spleen had regained its normal size, and only slight traces of the enlargement of the glands remained. After apparent recovery, the disease returned, and the patient died a month afterwards. The second patient was a woman aged 62, with enormous lymphatic swellings in the neck, groins, and axillæ, and splenic dulness 9 centimètres in breadth. There were 3,700,000 red corpuscles in a cubic centimètre, and 1 white to 450 red. Four drops of liquor arsenicalis were given twice daily, and injections of arsenic (first 4, afterwards 9 drops a a day) were made into one or other of the axillary glands. After twenty-five injections, the mass of glands was reduced from the size of a fist to a mass 1 inch in diameter. The patient died in an attack of asphyxia. At the necropsy, many lymphatic glands, varying in size from a hazel-nut to a walnut, were found in the anterior mediastinum. The cervical and retroperitoneal glands were swollen; the spleen was 15 centimètres long, and 9 centimètres broad. The ribs and sternum were very brittle; a gray-red mass escaped from the broken surfaces. The marrow of the femora presented the same appearance. In the third case, a woman, aged 27, had a mass of enlarged glands, varying in size from a walnut to a hazel-nut, lying on the left side of the neck, and extending from the angle of the lower jaw into the subclavicular and axillary regions. In the groins and axillæ, the swellings were somewhat smaller. There was nothing abnormal in the internal organs. The number of red corpuscles in a cubic millimètre was 3,700,000; and there was 1 white corpuscle to 250 red. Under the use of arsenic, reduction in the size of the lymphatic glands proceeded slowly but steadily, so that their size was considerably diminished. The fourth case was that of a boy, aged 8, with considerable enlargement of the cervical, axillary, and inguinal glands. The internal organs were healthy. There were 4,370,000 red blood-corpuscles in a cubic millimètre; and 1 white corpuscle to 190 red. Four drops of liquor arsenicalis were given twice daily, from July 18th to December 17th, with two short intervals. The lymphatic swellings diminished gradually, and the patient's appearance became more healthy.

32. *Koebner on a Cure of Lichen Ruber by Hypodermic Injections of Arsenic.*—In the *Berl. Klin. Woch.* of 13th Dec. 1880, Herr Koebner records the history of a well-characterised case of lichen ruber exudativus treated by hypodermic arsenical injections, with a favourable result. Regarding this disease, often mistaken for eczema, and attended by progressive wasting, Hebra pronounced the opinion that when extensive it is invariably fatal, and that treatment is unavailing. Of late years, the prognosis has not appeared so hopeless, if heroic doses of arsenic be administered. Dr. Koebner thus describes his case. The patient, a carpenter, aged 39, observed in May 1879 a red, itchy patch on the right shin; five months later, a similar patch on the left shin, then on the back, whence the trouble spread to his whole trunk, depriving him of sleep and strength. For two months he had been taking five to eight

drops of Fowler's solution daily. When seen by Koebner his whole body, from the neck downwards, was studded with innumerable dark red papules, somewhat glistening, and here and there umbilicated on their apices, occasionally covered with a fine scale, and conical in shape. They formed a sheet of eruption, discrete at parts, but mostly confluent, unmarked by any appearances of vesiculation or pustulation, and reaching down to the knees on the one hand, and the wrists on the other hand. The back was worse than the belly, and the extensor aspects of the limbs were worse than the flexor aspects. Thick infiltrated scaly patches of skin existed here and there on the most affected situations, and the penis showed a few papules. The legs were free. The patient was much troubled with scratching, a process he continued even while being examined. He was thin, wasted, and weak, but still perspired normally. All the viscera were healthy, but he showed the marks of a cured periorbital necrosis, as well as of white swelling of the left elbow joint, which was now ankylosed. The pulse and temperature were normal; there was nothing special in his previous history. He was treated by daily injections of Fowler's solution, diluted to one third of its strength with water, the dose varying from about three to six minims of the Fowler's solution, with immediate relief to the itching. Its administration by the mouth in doses of from ten to fourteen drops a day, tried for convenience' sake, proved a failure, and the endermic applications had to be resumed. These were repeated in like doses, at first daily, then at longer intervals; and by the whole treatment, which lasted two months, the patient obtained rapid improvement, ending in complete cure. Three months later, there was no return of the disease; traces of which remained only in the form of white scars.

A. OGSTON, M.D.

MEDICINE.

RECENT PAPERS.

1. DEBOVE.—On Nerve-Stretching in Locomotor Ataxy. (*Le Progrès Méd.*, Dec. 11 and 25, 1880.)

2. FRIEDENREICH.—On Spastic Spinal Paralysis. (*Hospitals-Tidende*, Ser. 2, Band vii.)

3. JOHNSON, GEORGE.—On the Diagnosis of the Various Causes of Backache. (*Brit. Med. Jour.*, Feb. 1881, p. 221.)——SQUARE, W.—On Backache. (*Ibid.*, p. 229.)——TURLE, J.—On Backache. (*Ibid.*, p. 271.)

4. GOWERS, W. R.—On Syphilis and Locomotor Ataxy. (*Lancet*, Jan. 1881, p. 95.)

5. BUZZARD, T.—On the Differential Diagnosis between Hysterical Conditions and Myelitis. (*Lancet*, Jan. 1881, p. 125.)

6. ALLEN, J. W. and OTHERS.—On the Incubation of Scarlet Fever. (*Brit. Med. Jour.*, Jan. 1881, p. 158.)

7. WILLIAMSON, R. L.—A Case of Glossitis. (*Lancet*, Jan. 1881, p. 136.)

8. MCBRIDE, P.—On the Etiology of Vertigo. (*Med. Times and Gaz.*, Jan. 1881, pp. 96, 118.)

9. DUMÉNIL.—Intestinal Obstruction by Large Biliary Calculus.

10. MARX.—On Catarrhal Diphtheria. (*Archiv für Klin. Med.*, Band xxvii, Heft 1, 2.)

1. *Debove, Westphal, etc., on Nerve-Stretching in Locomotor Ataxy.*—Dr. Debove, of the Bicêtre, has employed nerve-stretching in two case of locomotor ataxy (*Le Progrès Méd.*, Dec. 11 and 25, 1880). The first patient was a man with advanced ataxy, who had kept his bed for eighteen months. Sharp shooting pains of exceptional severity, preventing sleep, were felt in both the upper and lower limbs; the left side of the body suffering the most. Twenty-four hours never passed without the pain being experienced; large doses of morphia administered subcutaneously alone afforded relief. About every eighth day, gastric, urethral, and vesical complications arose. Inco-ordinate movements were present in the lower limbs, it being impossible for the patient to stand, and on attempting to walk, even when supported, he fell. There was also loss of the sense of the position of the lower limbs, and patellar reflex was absent on both sides. There was marked myosis of both pupils, but vision was unaffected; cutaneous sensibility was blunted. On Nov. 18, 1880, Dr. Gillette forcibly stretched the left sciatic nerve at the lower third of the thigh posteriorly. It was deemed advisable not to administer chloroform, as physiological experiments have shown that, when a nerve is sharply pinched, there is a momentary arrest of respiration and circulation. Not much pain was complained of during the operation, this being attributed to the patient's saturation with morphia; the man remarked he had not suffered one-hundredth part as much as he did during his attacks. The immediate results of the operation were an entire cessation of the darting pains in the limbs, and almost complete disappearance of the inco-ordinate movements. A month later there had been no return of the pains; the gastric crises and inco-ordinate movements on both sides had also disappeared; there was no change in the tendon reflex and myosis. The patient was subsequently shown by M. Charcot to his class; he was able to raise alternately one leg, and then the other; could tell when the soles of the feet were touched, and was able to take a few steps. The second instance was a man who had seen the improvement effected in the previous case, and requested that the operation might be performed on himself. The pains complained of were of an incessant shooting character in the upper limbs. The median and radial nerves were stretched by Dr. Gillette, Dec. 16. The results were a considerable diminution of the darting pains in the right upper limb, and a disappearance in the left arm and lower limbs; the plantar anæsthesia was much diminished on the left side, and the inco-ordinate movements were ameliorated. Walking can now be managed without support, and the patient is able to sleep regularly without the aid of morphia, affirming that his pains are nothing to what they were formerly.

Other cases have also been recorded in which nerve-stretching has been resorted to in locomotor ataxy. Dr. Carl Langenbuch (*Berl. Klin. Woch.*, No. 48, 1879) stretched both the sciatic nerves, then the two crural nerves, for the malady (see LONDON MEDICAL RECORD, March 15, 1880, p. 89). Dr. Esmarch (*Deutsch. Med. Woch.*, No. 19, 1880) satisfactorily stretched the nerves in the axilla to lessen pain in the arm and forearm. Erlenmeyer also stretched successively the two sciatic nerves, but no diminution in the pains was effected, and the inco-ordinate movements continued as before the operation. Dr. Westphal has since (*Berl. Klin. Woch*) published results of a necropsy of Langenbuch's patient, who died from chloroform-narcosis during epileptic convulsions. The spinal cord was free from the characteristic morbid changes, and this throws doubt on the truly ataxic character of this and, inferentially, some of the other cases cited.

THOMAS F. CHAVASSE, M.D.

2. *Friedenreich on Spastic Spinal Paralysis.*—In an article in the *Hospitals-Tidende*, series 2, Band vii, Dr. A. Friedenreich gives a short sketch of the history and symptomatology of this form of disease, and discusses the question, how far it is in itself a disease, and whether it has a constant course, and a constant pathological basis. He refers to the cases of spastic spinal paralysis with a more or less acute course, described by others, especially Veldens and Hench, and relates a case of similar nature which had come under his own observation. A man, aged 39, presented in as marked a form as possible the muscular rigidity, the spastic gait, and the enormously increased tendon-reflexes, characteristic of spastic spinal paralysis. The disease had probably been caused by the influence of alternations of heat and cold; it begun with symptoms which were referred to rheumatic fever, and had apparently reached its culminating point when the patient was admitted into the Communal Hospital at Copenhagen. The duration of the illness was about three months and a half, and ended in almost complete recovery. The author then notices the literature treating of the transitional forms between spastic spinal paralysis and other forms of chronic myelitis, and finally speaks of the pathology of the disease. After noticing the *post mortem* appearances described by Stofella, Westphal, and Charcot, he describes the following case. The patient was a man, aged 31, who had been somewhat imbecile from infancy. His illness began about half a year before he came under observation, and he presented in the most distinct form the motor disturbances characteristic of the disease. He died about a year and a half after the commencement of his illness. The spinal cord was everywhere softened, being in some parts almost fluid. On minute examination, numerous portions were found, varying from microscopic smallness to the size of a pea, while the tissue was completely broken down and reduced to detritus, while at the circumference of the completely destroyed portions there were generally found parts of which the structure was still recognisable, while networks of the neuroglia were found, if not destroyed, to be filled with an amorphous more or less granular mass, coloured in various shades by carmine, and having scattered roundish nuclei; in other parts there was a quite amorphous exudation, which was coloured rather strongly by carmine, and contained similar nuclei. There was also found, diffused over nearly the whole mass of the spinal cord, but in very varying degrees in different parts, hypertrophy of the interstitial tissue, while the nerve-fibres were partly thrust asunder, and showed here and there distinct swellings, especially of the axis-cylinders. There was no indication of a systematic diffusion of the interstitial changes. The grey substance, especially in the cervical region, showed very scanty ganglion-cells, there being often only a single one in a section of the whole anterior cornua, while the cells of the posterior cornua were on the whole better preserved. Of the existing cells, some were rather small and highly pigmented, while others were of normal size, but very pale, and having an abnormal tendency to a globular shape. The central canal was obliterated throughout; the pia mater was thickened, and very adherent in some parts. Dr. Friedenreich believes that he is justified in drawing the following conclusions. 1. Spastic spinal paralysis is not an independent disease, but a congeries of symptoms which may occur in various affections of the spinal cord. 2. The phenomena depend on an increase of the tendon-reflexes, in combination with partial preservation of voluntary motor power. 3. Where the phenomena of spastic spinal paralysis occur, they may indicate sclerosis of the lateral columns; but, in the present state of science, they do not prove it. Still less can they prove the existence of an exclusive or only transient affection of the lateral structures of the pyramid.

3. *Johnson and others on Backache.*—In the *Brit. Med. Jour.*, Feb. 1881, p. 221, Dr. George Johnson publishes a lecture on the diagnosis of the various causes of backache, with hints on treatment. One very common cause is corpulency, permanent relief from which may often be obtained by careful dieting. In other cases, the urine is highly turbid, which makes the sufferer fear that kidney-mischief is the cause, when really dyspepsia is the exciting cause of the pain; and here, again, a properly selected dietary speedily effects a cure. Aneurism of the aorta is among the less frequent, but more formidable, causes of severe and persistent backache, due to pressure on the vertebral column; cancerous glands in the abdomen producing much the same effect, in many cases. Diseased kidneys cause backache less frequently than is usually believed; still, they are not an uncommon cause of severe pain in one or both loins. Disease of the bones of the spine, and of the spinal cord, are among the most serious causes of backache, and must be carefully distinguished from the muscular and rheumatic affections that frequently, in the form of lumbago, cause great discomfort in the dorsal region. Mr. Wm. Square, in the same journal, page 229, describes a form of backache frequently met with in weak-looking girls. The fault is not in the patients, but in their beds. They so lie that the back is bent, and all the muscles of the spine put to their utmost stretch. A soft pillow, placed in the small of the back, quickly and effectually relieves this form of backache. Dr. James Turle, in the *Brit. Med. Jour.*, Feb. 1881, p. 271, criticising Mr. Square's theory of the cause of backache, questions the theory of the spinal tendons being stretched as the cause of the pain, but allows the curative power of the small pillow to the back, the *rationale* of its action being to keep the back warm; for, according to Dr. Turle's theory, the cause of the pain is cold acting on the back, from the fact that the bedclothes are not properly and sufficiently tucked in to prevent rapid cooling. Dr. Sawyer, at the same page, attributes one form of backache to a loaded colon.

4. *Gowers on Syphilis and Locomotor Ataxy.*—In the *Lancet*, Jan. 1881, p. 95, Dr. W. R. Gowers adduces convincing facts to prove that syphilis plays an important part in the etiology of locomotor ataxy. Since Duchenne first noticed the connection between the two diseases, Schultze, Fournier, Vulpian, and Erb have corroborated his statements. Dr. Gowers has found that in thirty-three cases that have come under his own notice, twenty-three presented a clear history of primary or constitutional syphilis. Seventy per cent. had thus suffered from syphilis, 53 per cent. of whom had suffered undoubtedly from constitutional symptoms. Of the remaining ten patients, five had suffered from gonorrhœa. 'Facts teach us, as far as they go, that one-half of the patients with ataxy would not have had the disease if they had not, at some previous period, suffered from syphilis.' The interval between the syphilis and the first symptom of ataxy is considerable. No case of simple tabes was met with out of Dr. Gowers' eighteen cases earlier than seven years after in-

fection. Two-thirds of the cases occurred more than ten years after the primary disease.

5. *Buzzard on the Differential Diagnosis between certain Hysterical Conditions and Myelitis.*—Dr. Thomas Buzzard, in the *Lancet*, Jan. 1881, p. 125, draws attention to the difficulties that beset the diagnosis, in some exceptional cases, of subacute myelitis, anterior polio-myelitis, and lateral spinal sclerosis from hysteria. In the case of a girl, aged 14, symptoms that *primâ facie* pointed to sclerosis of the lateral columns were diagnosed and treated successfully as hysteria. The cases of two young women are next adduced; one of acute myelitis that had been diagnosed and treated as hysteria; the other—really a case of hysteria—was sent in as a paralytic. Electrical examination was quite sufficient to exclude hysteria in the first case. In the second case, the patient, aged 24, came into the hospital unable to stand alone. For three years she had suffered from convulsive fits, and was described as losing her consciousness. Under the daily use of the wire-brush, with induced currents, for two to three weeks, and general treatment, the patient was able to walk a short distance, and soon was discharged cured.

6. *Allan and others on the Incubation of Scarlet Fever.*—In the *Brit. Med. Jour.*, Jan. 1881, p. 158, Messrs. J. W. Allan and W. Sykes record three cases of scarlet fever in which the period of incubation appears capable of being absolutely fixed. In two of the cases, forty-eight hours elapsed from the period of exposure to the infection to the presence of the eruption, in the other case, only twenty-four hours. [An interesting legal case is reported by Dr. Sinclair in the *Journal*, October 1879, p. 601, in which only a few hours elapsed between the exposure to infection and the outburst of the fever. As an instance of prolonged incubation, a case is cited by Mr. Raye in the *Lancet*, April 1875, p. 595, where four weeks elapsed before the fever declared itself.—*Rep.*]

7. *Williamson on a Case of Glossitis.*—Mr. R. L. Williamson gives, in the *Lancet*, Jan. 1881, p. 136, the notes of a case of glossitis occurring in a man aged 30, in whom the tongue protruded two-and-a-half inches beyond the teeth. The disease had existed twenty-eight days, and a deep ulcerated fissure existed where the tongue rested on the teeth. No relief ensued from local applications, when a shield and support of gutta-percha was moulded to cover the lower incisors. Great relief immediately followed, and a rapid cure resulted in a week.

8. *McBride on the Etiology of Vertigo.*—Mr. P. McBride sums up a paper, published in the *Med. Times and Gaz.*, Jan. 1881, pp. 96, 118, with the following deductions. 1. That there is a cerebral area or tract, stimulation of which produces vertigo. 2. That this area may be stimulated by impressions—ocular, auditory, sensory, or visceral—as well as by cerebral changes, and is in intimate physiological relation with the vomiting and oculo-motor centres. That is to say, impressions conveyed to one of these centres tends to involve the others by overflow of nerve-energy. 3. That excessive stimulation of the vertiginous area will produce an overflow of nerve-impulse to various motor centres, and probably unconsciousness. 4. That inasmuch as the phenomena of its excessive stimulation (as in rotated men and animals, Menière's disease, etc.) are represented by a definite train of symptoms, we may infer that overflow of nerve-impulse usually proceeds in the same direction, or, in other words, involves the same centres—first those which are intimately connected with it, then those which are more remote. 5. Possibly the same process of reasoning may be applied to death from shock, epileptic attacks, convulsions, and some of the other so-called explosive neuroses. 6. That in typical cases, ocular, stomachic, and auditory, vertigo may be distinguished from one another by the centre first involved. Thus we should expect that stomach-vertigo would be preceded by nausea, if not by vomiting; that ocular vertigo should be caused by changes in the motor apparatus in the eyeball; but that in auditory vertigo the giddiness is the first and may be the only symptom. 7. That sea-sickness is probably due to stomach-irritation; for here, as a rule, we have vomiting, and afterwards vertigo, which, however, is by no means a constant accompaniment.

RICHARD NEALE, M.D.

9. *Duménil on Intestinal Obstruction by Large Biliary Calculus.*—M. Duménil presented to the medical society of Rouen a biliary calculus of great size, which had given rise to intestinal obstruction. A patient, aged 46, was seized on the night of the 19th and 20th July with violent abdominal pain and biliary vomiting. The circumstances of the intestinal obstruction continued in spite of treatment for six days, when the object which had given rise to the occlusion was expelled, and health was restored. This body consisted of three biliary calculi; one large and two much smaller, but connected together in the shape of a stirrup by fæcal matter and detritus, with intestinal mucous membrane; prolonged washing separated the parts. M. Duménil discusses how this enormous biliary calculus made its way into the intestine; he cannot admit that it was by traversing the ductus choledochus, but attributes it to ulceration of the gall-bladder or biliary canals. This fact is interesting in the view of the symptoms of obstruction to which it gave rise, and may be remembered in connection with a case of intestinal obstruction. The form and condition of the calculus proved that it had remained for a long time in the gall-bladder, and its passage into the intestine showed that old serous adhesions must have existed between the gall-bladder and the corresponding part of the intestine.

10. *Marx on Catarrhal Diphtheria.*—The author who has, under the superintendence of Professor Oertel, studied a series of these cases, defines catarrhal diphtheria (*Archiv für Klin. Med.*, Band xxvii, Heft 1, 2) as that form in which there is only superficial and limited diphtheritic membrane combined with simple catarrh of the mucous membrane, slight constitutional symptoms, inconsiderable glandular swelling and limitation of the disease to the throat. That it is a true diphtheria, he considers, is shown (1) by its clinical character; (2) by its not unfrequently passing into the severer forms; (3) by its infective power; and, lastly, (4) by its microscopic pathology. The disease begins with slight fever, malaise and pain in swallowing. The mucous membrane of the throat at some part, generally the tonsil, is swollen, red and has on it one or more greyish spots like hoar-frost. These spots are superficial, limited and disappear in two to three days, rarely lasting six days; unless, as sometimes occurs, the disease passes into the severe form with thick and spreading membrane. Microscopically these spots are found to consist of colonies of micrococci, which pass through the comparatively unaltered superficial epithelial layers into the deeper layers where the cells are swollen up and contain large nuclei. After twenty-four hours, pus forms in the deeper layers, and the superficial

ayers are thrown off. Catarrhal diphtheria differs from the severe form in the absence of a fibrinous exudation between the epithelium, and from simple catarrh of the mucous membrane by the presence of micrococci in place of the numerous organisms in catarrhal muco-purulent secretion, such as leptothrix buccalis, oïdium albicans, etc. In the treatment of this affection, the author recommends (1) immediate isolation of the case, notwithstanding apparent mildness; (2) frequent inhalations of steam; and, (3) disinfection of the mouth with gargles, etc. Astringents ought to be avoided as checking the separation of the membrane, which is furthered by a rapid formation of pus under the influence of warm inhalations. James Anderson, M.D.

SURGERY.

RECENT PAPERS.

1. West, J. F.—The Surgical Treatment of Empyema. (*Birmingham Med. Rev.*, Jan. 1881.)
2. Staton, L. L.—On Gastrostomy. (*North Carolina Med. Jour.*, Oct. 1880.)
3. Kelsey, C. B.—On Cancer of the Rectum. (*Amer. Jour. of Med. Sciences*, Oct. 1880.)
4. Terrillon and Monod.—On Extirpation of Goître. (*Bulletins et Mem. de la Soc. de Chir.*, Nov. 11, 1880.)
5. Gosselin.—Lipoma of the Tongue. (*Le Progrès Méd.*, Dec. 11, 1880.)
6. Owen, Edmund, and Smith, Alder.—Abscess in the Knee-Joint healed by free Incisions and Drainage. (*Lancet*, Feb. 1881, pp. 246, 253.)
7. Wood, John.—Two Obscure Cases of Abdominal Tumour. (*Lancet*, Feb. 1881, p. 249.)
8. Treves, F., and McCarthy, J.—On the Condition of Large Arteries of the System under Antiseptic and Non-Antiseptic Measures. (*Brit. Med. Jour.*, Feb. 1881, p. 232.)
9. Rosenberger.—On the Healing up, under Antiseptic Precautions, of Fresh and Dead Tissues in Serous Cavities, and the Subsequent Fate of these Tissues. (*Arch. für Klin. Chir.*, Band xxv, Heft 4.)
10. Friedlander.—On Shellac Concretions as a Cause of Ileus. (*Berl. Klin. Woch.*, 1881, No. 1.)
11. Senn.—On Fracture of the Rim of the Acetabulum. (*New York Med. Rec.*)
12. McGraw, T. A.—On a recent Colles' Fracture examined *post mortem*. (*Detroit Lancet*, Dec. 1880.)
13. Szuman, L.—On Amputation of the Breast by a Bloodless Method. (*Centralb. für Chir.*, No. 40, 1880.)
14. Wagstaffe.—Lengthening of the Limb as a Result of Disease of the Knee-Joint. (*St. Thomas's Hosp. Reps.*, vol. x, 1880.)
15. Studsgaard.—On Colotomy. (*Hospitals-Tidende*, series 2, Band vii.)

1. *West on the Surgical Treatment of Empyema.*—In a paper on the treatment of empyema by excision of a portion of a rib (*Birmingham Med. Review*, Jan. 1881), Mr. James F. West, of Birmingham, brings under the notice of the profession two cases in which he resorted to this operation. The cases, although they were not fortunate, are recorded for the purpose of stimulating further discussion, and also with the view of exemplifying the difficulties which beset the operation, even in suitable cases. In the first case, the subject of which was a female child, aged two years, aspiration was performed on March 12th, when sixteen ounces of sero-pus were withdrawn. On March 15th a permanent opening was made, from which there was a large escape of healthy pus, in the seventh intercostal space, midway between the spine and the sternum. On March 27th, a second opening was made in the space below and posterior to the former opening, so as to ensure thorough drainage. On April 19th, as the temperature had been rising for some days, and had reached 104 deg., and, as all other measures had failed, Mr. West excised one inch and a quarter of the rib bounding the opening. No permanent amelioration of the symptoms followed the operation, and the child sank six days after its performance. In the second case, empyema had commenced two years before the patient (a male, aged 15) was first seen by Mr. West, and for a long time matter had been finding its way out of the chest by a small sinus near the left nipple. A large portion of the seventh rib was at once resected. The relief caused by the discharge of a pint of fetid pus immediately after the chest cavity had been opened was considerable, and for two months the boy continued to improve, the purulent discharge diminishing day by day, and, concomitantly, the health and spirits returning. The latest report, however, states that the cavity of the chest was still secreting pus, and that the opening in it, though apparently patent, was not, it was feared, large enough to ensure complete drainage of its contents. Mr. West trusts that in the future the operation of resection of one or more ribs may be less necessary, owing to the fact that tapping of the chest has been performed so early as to succeed in relieving pleuritic effusions while they continue to be of a serious character. If thoracentesis be resorted to sufficiently early, by means of the aspirator, pus, it is stated, will rarely be found to form. Should, however, such an unfortunate condition arise, prompt evacuation of the pus by a free opening, supplemented, if necessary, by a second opening, made, like the first, with antiseptic precautions, will generally lead to a good result. Injections of weak solutions of carbolic acid or iodine will prevent, in most cases, putrefaction of the retained pus, and the use of drainage-tubes will favour its early removal. A case is reported by Mr. West to prove that a happy result is possible in instances where the pleura is full of pus, and even where there is a communication between the pleural collection and the bronchial tubes. In order to prevent compression of the lung in cases of pleuritic effusion, the fluid, Mr. West states, should be withdrawn at an early period. If aspiration do not suffice, a large opening should at once be made into the chest. Should these measures fail, then, and *then only*, in Mr. West's opinion, is resection of a portion of rib called for. This operation, Mr. West concludes, is in itself simple and easy of performance; but it fails because, no matter how much bone be taken away, the aperture seems in a short time to become so small, owing possibly to a thickened state of the pleura, that a portion of pus always inevitably remains shut up in the chest, and, by its decomposition, endangers the patient's life.

2. *Staton on Gastrostomy.*—Dr. L. L. Staton of Tarborough, U.S., has published in the *North Carolina Med. Journ.*, Oct. 1880, a case of œsophageal stricture successfully treated by the operation of gastrostomy. The patient was a negro-boy, aged 8, who, when first seen by the author, was almost dying of hunger, on account of a cicatricial stricture of the œsophagus, the result of drinking by mistake, nine months previously, a large quantity of concentrated lye (solution of soda). After having exhausted all means at his command for dilating the stricture, which was found to commence about three inches down the gullet, and through which not even the smallest bougie could be passed, Dr. Staton decided on performing gastrostomy. The boy, who had been kept alive for some months by enemata, was

much emaciated and very weak. Chloroform having been administered, the abdominal wall was incised for two and a half inches in a diagonal direction, from right to left, under the cartilaginous portion of the eighth left rib, and as near to the sternum as possible, but a finger's breadth from the median line. Dr. Staton, on examining for the stomach with two fingers, came into contact with a hard and seemingly solid mass, that felt like a fibrous tumour, but which, when drawn in part through the opening in the abdominal wall, was found to be the contracted viscus, which measured about two and a half inches in length, and about one inch and a half wide. An incision about three quarters of an inch long, and parallel with its long diameter, was made into the contracted stomach near the smaller curvature. Into this orifice was introduced the inner expanded extremity of a short hard rubber-tube, and the stomach was returned within the abdominal cavity, the outer extremity of the rubber-tube remaining without the wound in the abdominal wall. This hard rubber-tube, Dr. Staton describes as one presenting much the appearance in shape and length of the small wooden reel upon which sewing cotton is wound, each end or flange being larger than its central diameter, which was three-eighths of an inch. The object of the inner flange was to insure its retention within the gastric opening; and of the outer flange to prevent its being drawn inwards by the violent contractions of the stomach. The operation, which was performed with strict attention to all the details of Lister's antiseptic method, lasted an hour. The boy recovered very slowly from his enfeebled condition, but never had any peritonitis or inflammation of any of the tissues about the seat of operation. Six months from the date of operation, he was reported as doing well. Dr. Staton describes how he was nourished after the operation by the masticated food being passed into the stomach through an external and artificial œsophagus consisting in a soft rubber-tube, but no mention is made of the removal of the small flanged tube inserted at the time of the operation.

3. *Kelsey on Cancer of the Rectum.*—Dr. Charles B. Kelsey of New York, in an article (*Amer. Journ. of the Med. Sciences*, Oct. 1880) on the surgical treatment of cancer of the rectum, states that it may be accepted as proved by a sufficient number of carefully examined cases that this disease may be removed, and its return delayed for many years. Cure can, however, only be effected by excision, and all other means may be set aside as hopeless failures. The height to which it is safe to go in the operation of excision cannot be definitely stated for all cases, the reflexion of the serous coat upon the rectum being at a variable point. Dr. Kelsey can only say that the danger increases with every line above three inches. Of sixty-four cases of excision collected by Mr. Cripps, eleven were fatal; six patients died from peritonitis, one from cellulitis, and four from accidents incident upon the surgical interference. In three of the six cases of peritonitis the peritoneum had been opened, and in the other three the disease reached fully three inches from the anus. Out of the sixty-four cases, there were twenty-three in which the disease had not returned after an interval varying from a few months to over four years. Curling has reported one case of removal of an epithelioma, in which there had been no return in the rectum after an interval of seven years; and Velpeau and Verneuil have each reported cases in which the cure was apparently permanent. Dr. Kelsey states that unfortunately surgeons rarely meet with the disease at a stage when extirpation is justifiable; that is, when the cancerous growth is limited to a circumscribed spot within three or three-and-a-half inches of the anus, when it is movable on the muscular coat, and has not invaded the deeper tissues, and before the neighbouring glands are enlarged. With regard to the method of operation, the main requisite in controlling the free hæmorrhage is plenty of room, and this is best obtained by the posterior incision through the rectum and anus, nearly to the coccyx. This incision greatly facilitates the performance of the operation, and, moreover, allows free drainage. The accidents most to be feared are opening the peritoneum, and wounding neighbouring viscera; and in avoiding these, the advantages of a careful, and, if necessary, deliberate dissection with the knife over the écraseur or cautery are manifest. In the female, the recto-vaginal septum may be removed to a considerable extent without interfering with the good result; but a wound of the vesiculæ seminales, or base of the bladder, in the male is a serious matter. Two opposite conditions are to be feared after the operation, stricture and incontinence of fæces. The former may be met by dilatation, and the latter is not a contra-indication to the operation. The whole sphincter muscle, Dr. Kelsey asserts, may be removed, and the patient recover a comfortable degree of control over everything, except fluid motions. This is due, it is stated, to the greater or less degree of contraction which always follows; to the action of the mucous membrane, which may become more or less prolapsed, and act as a valve; to the fact that a few fibres of the sphincter may be left; to the thickening of muscular tissue at the lower end forming a rudimentary sphincter; and to the physiological fact that the sigmoid flexure is the reservoir of fæces, and that normally the rectum is an empty pouch, only filled at the time of defæcation. The palliative treatment of cancer of the rectum is directed chiefly to the relief of pain, the overcoming of obstruction, and maintaining cleanliness. For the relief of pain, we have at our command: regulation of the passages, diet, and the recumbent posture; anodynes locally and by the mouth; partial destruction of the growth by means of the curette, cauterisation, or partial extirpation; division of the sphincter; lumbar colotomy. Division of the sphincter, it is asserted by Dr. Kelsey, gives great relief, especially in cases where the muscle is firm, irritable, and inclined to spasm, and that the results of this operation in proper cases fully equal those of lumbar colotomy. The latter operation, which does not seem to be in much favour with the author, is stated to be applicable only to those cases, and these are not common, in which the pain may reasonably be supposed to be entirely or in great part due to the direct contact of fæces with the diseased surface.

4. *Terrillon and Monod on Extirpation of Goître.*—The two following cases were reported by M. Terrillon to the *Société de Chirurgie* of Paris, on Nov. 17, 1880 (*Bull. et Mém. de la Soc. de Chir.*, No. 11, 1880). The first case, under the care of M. Monod, was one of general hypertrophy of the thyroid body, with a large tumour in the right lobe. The patient was a woman, aged 41, a native of Berne, and had resided in the Canton Vaud from 1856 to 1878. A slight swelling on the right side of the neck was first noticed, when the patient was eight years old. This remained stationary during

fourteen years, and then increased rapidly in size, and became very painful. She frequently suffered from attacks of dyspnœa. Temporary relief was afforded in 1863, and again, three years later, by small incisions into the swelling and discharge of a quantity of fluid resembling *café noir*. The patient, when first seen by M. Monod in September 1880, was suffering much from excruciating pain in the tumour, and from dyspnœa. The tumour had recently increased very much in size. On the right side of the neck was a large firm swelling extending from the hyoid bone to the clavicle, freely movable, undulated on the surface, and continuous with an elongated soft swelling which passed over the trachea downwards to the left side of the sternum. The tumour, together with its prolongation, was extirpated on October 20th. A vertical incision, about three-and-a-half inches in length, was made along the right side of the neck, and the thyroid tumour exposed and removed. The prolongation was removed through a horizontal incision, about one inch and a quarter in length, commencing at the inferior extremity of the first and vertical incision. During the operation, which lasted two hours, there was free bleeding from very many points. The carbolic spray producer was used during the operation, and the wounds were covered with Lister's dressing. The patient made a good recovery, and was discharged on the twenty-eighth day from the date of operation. In the second case, which was treated by M. Terrillon, the patient, a female aged 24, had first noticed, four years before she was seen by this surgeon, a swelling in front of the neck, which was most marked on the right side. During the fourth year, the tumour on the right side increased rapidly in size, and caused from time to time alarming disturbances of respiration. M. Terrillon found that the right lobe of the thyroid body formed a tumour of double the size of a man's fist, and extended from the parotid gland to the clavicle, and for some short distance behind this bone. The larynx and trachea had been forced over to the left side. Extirpation was at once proposed by M. Terrillon, after consideration of the imminence of sudden attacks of suffocation, of the difficulty that would have attended tracheotomy, and of the confidence which this surgeon had in the present means of arresting hæmorrhage and in Lister's method. A vertical incision having been made from the angle of the lower jaw to the clavicle, and a second carried from the posterior extremity of this to the sterno-mastoid muscle on the left side, the tumour was carefully dissected out, each large vessel being secured with a double ligature before division. Firm adhesions were found between the inner portion of the tumour and the trachea. There was free bleeding during the operation. The tumour was found to be a very vascular parenchymatous goître. In this, as in M. Monod's case, the operation was performed and the wounds dressed with strict attention to all the details of Lister's method. The patient progressed favourably, and was discharged as convalescent on the twenty-second day from the date of operation.

W. Johnson Smith.

5. *Gosselin on Lipoma of the Tongue.*—M. Gosselin reports (*Le Progrès Méd.*, Dec. 11, 1880) the case of a man, aged 48, who, when 23 years old, perceived a small button-like substance on the dorsum of the tongue, to the right of the tip. It increased slowly without pain, and interfered somewhat with phonation, but not with deglutition or respiration. On admission (Feb. 13, 1880) into the Hôpital de la Charité, the tumour was of the size of a walnut, pediculated, soft, fluctuating, and slightly ulcerated. Sensibility was wanting at the affected portion of the organ. The application of ice having failed to produce any beneficial effects, the pedicle was transfixed by an elastic ligature, and removal of the tumour effected by means of scissors. The wound thus made healed in a month. The growth was lobulated and composed of adipose tissue, of a pale yellowish colour. The mucous membrane of the tongue was normal, but the papillæ were absent, except near the base of the growth, where they were very small and rudimentary. T. F. Chavasse, M.D.

6. *Owen and Smith on Abscess in the Knee-joint.*—Three cases of suppuration in the knee-joint by Mr. Edmund Owen and one by Mr. Alder Smith, treated by free incisions, washing out with weak solutions of iodine, and drainage, were shown at the meeting of the Medical Society of London (*Lancet*, Feb. 1881, pp. 246, 253). Three of the four cases were radically cured, and as the treatment, although not new, is seldom seen carried out, it deserves special attention. Mr. Owen concludes his report thus—'I will venture to express the opinion that the chief requisites for obtaining such happy results (as those reported) in the treatment of acute joint-abscess in early childhood, are the early employment of clean and free drainage and the prolonged continuance of absolute rest, conditions fortunately very generally obtainable.'

7. *Wood on two Obscure Cases of Abdominal Tumour.*—Mr. John Wood (*Lancet*, Feb. 1881, p. 249) reports a case in which a tumour proved, on abdominal section, to be a fibroma connected with the cæcum. The tumour was of the size of three walnuts, and adhered three-quarters round the cæcum, and was external to the peritoneum. Some difficulty was experienced in excising the mass. After great suffering for five days, fæcal matter was discharged from the wound. Four months afterwards, the wound had healed, and motions passed *per anum*. In the second case the tumour proved to be enchondroma of the peritoneum in a man, aged 60. With difficulty the mass was dissected away, and the man left the hospital a month after the operation.

8. *Treves and McCarthy on the Condition of Large Arteries after Ligature under Antiseptic and Non-Antiseptic Measures.*—Mr. Frederick Treves brought before the Royal Medical and Chirugical Society (*Brit. Med. Jour.*, Feb. 1881, p. 232) the history of a case in which death took place 108 days after ligaturing the carotid antiseptically, and 87 days after ligature of the subclavian non-antiseptically. The wound of and around the carotid artery was perfectly healed, no trace being found in the carotid sheath, and every trace of ligature had disappeared. No constriction could be seen in the vessel, and its external outline was unaltered. The vessel was found patent, but narrowed at the seat of ligature by a kind of perforated diaphragm, or a miniature pylorus, leaving a central aperture about a line and a half in diameter. The subclavian artery was found embedded, at the seat of ligature, in a mass of very firm inflammatory material, and occluded for three-quarters of an inch, and entirely obliterated for half an inch. No trace of ligature (catgut) could be found. In reviewing the case, Mr. Treves concluded that the failure of the carotid ligature was due to antiseptic measures, which erred almost too much on the side of perfection, producing too ready and too complete a return of the parts to their

natural condition. In the case reported by Mr. McCarthy, the subclavian, ligatured under antiseptic precautions, was found, sixty-four days subsequently, pervious. An animated discussion followed the reading of the above cases, eliciting various opinions for and against the antiseptic ligaturing of large arteries. In an editorial article, the editor of the *Lancet* points out (Feb. 1881, p. 267) that the cases support the generally accepted doctrine, that, where there is no wound of the inner coats of the artery, there can be no closure. In neither of the cases did the ligature appear to cut through the two inner coats, so that the failure was due to the manner of using the ligature rather than to its material. The catgut ligature does not introduce a new mode of obliterating vessels. RICHARD NEALE, M.D.

9. *Rosenberger on the Healing up, under Antiseptic Precautions, of Fresh and Dead Tissues in Serous Cavities, and the Subsequent Fate of these Tissues.*—Starting from the observation that foreign bodies and ligatured portions of tissue, *e.g.*, the returned pedicle in ovariotomies, may without injury to the patient be left in the body, the author (*Archiv. für Klin. Chir.*, Band xxv, Heft 4) has performed certain experiments with living material, mostly pieces of muscle, but also whole organs (the kidney). The results of these experiments are as follows. With antiseptic precautions, pieces of living tissue heal up in the serous cavities of animals, either quite without, or with only the very slightest reaction. After a time, these pieces disappear without leaving a trace. The tissue need not be from the same animal — need not even be from the same species of animal. The process is not one of digestion, but commences with the encapsuling of the tissue on the third or fourth day. From the capsule, cells wander into the enclosed tissue, and break it up. A rarer method is for the piece of tissue, after five or six days, without having caused any irritation in the peritoneal cavity, to have still little or no union with its surroundings; the capsule becomes firmer, receives a capillary network, and the tissue thus nourished, lives on. This method occurred only in the case of animals of the same species. A third method is precisely the same as the last, with the exception that, in the centre of the piece, probably owing to insufficient nourishment, a pus-cavity is found.

10. *Friedländer on Shellac Concretions as a Cause of Ileus.*—The author communicates (*Berl. Klin. Woch.*, 1881, No. 1) a case of ileus, treated with laxatives and enemata, and ending fatally in seven days. The necropsy showed enormous distension of the small intestines, reaching within a little of the ileo-colic valve; and, fast in the intestine, about a foot from the valve, was a concretion completely closing its lumen. In the fluid matter above the obstruction were numerous smaller masses of similar nature, and, in the stomach, an enormous quantity (over two pounds) of large concretions. These concretions were of irregularly rounded form, as large as a goose's egg, of a brown colour, and hard consistence. They proved to be shellac. The patient was a drunkard, and had for years been accustomed to drink, in addition to large quantities of spirits, the polishing fluid (solution of shellac in spirit) used by him in his trade of cabinet-maker. The spirit was absorbed, and the shellac deposited in the stomach, from which a concretion had passed into the small intestine, causing death. The habit seems to be a not uncommon one among this class of workmen in Berlin. JAMES ANDERSON, M.D.

11. *Senn on Fracture of the Rim of the Acetabulum.*—An article by Dr. Senn, of Milwaukee, entitled 'A Contribution to a Knowledge of Fracture of the Rim of the Acetabulum, based on the Reports of Twenty-seven Cases and Experiments on the Cadaver', analysed in the *New York Medical Record*, January 1881, is an exhaustive and comprehensive document, and merits the attention of surgeons generally. Seven experiments were made on the cadaver which demonstrate how difficult it is to fracture the rim of the acetabulum, and tend to corroborate the views of the majority of surgeons, who consider this injury one of the rarest accidents in surgery. These experiments also lead to the conclusion that fractures through the floor of the acetabulum are of more frequent occurrence than simple fracture of the rim, and are the result of a less degree of violence. Of the twenty-seven cases, eighteen were males, four females, and in the remaining five the sex is not stated. The disproportion between the males and females is explained by the fact that the former are more frequently exposed to severe accidents. The extremes of the ages were 18 and 78 years, so that most of these cases occurred during the time of life most exposed to grave injuries. The symptoms presented are those of dislocation and fracture combined; the symptoms of the former resemble those of ordinary dislocation, while the latter are directly referable to the broken bone itself. A certain degree of displacement of the head of the femur was present in all cases where a diagnosis was made during life. In a large majority of cases, that portion of the rim is fractured which is in the direction of the usual form of dislocation; so that the same injury which produces a dislocation may also cause a fracture, provided it is sufficient in intensity and the limb is abducted at the time the injury is received. Inversion of the foot and rotation of the femur inward were present in fourteen cases, while the opposite condition existed in three cases, and in ten cases no mention is made of this symptom. The characteristic symptoms of the injury are those which are referable to the fracture itself, and these are crepitus, easy reduction, and difficult retention. The crepitus differs from that of ordinary fractures; it is the roughness obtained from rubbing an articular surface against a broken surface of bone, and is not as loud or distinct. Crepitus and a tendency to reluxation are the symptoms on which we place the most reliance to distinguish this fracture from simple dislocation. In some cases, Middledorff's method may be of great service to determine the existence of fracture of the rim. After reduction of the limb has been accomplished, a long stout needle is passed through the tissue to the supposed seat of the fracture. By lateral movements of its point the defect in the margin, as well as the roughness of its surface, is ascertained. An effort should now be made to fix the detached fragment with the point of the needle; and, on rubbing it over the broken margin, a rough crepitus is elicited. Regarding the prognosis, Dr. Senn is of the opinion that all uncomplicated fractures of the rim of the acetabulum tend to recovery. In twenty-three cases where the result is noted in this regard, thirteen recovered and ten died. The prognosis is less favourable if the floor of the acetabulum be also implicated in the fracture. Of four cases of this sort, only one recovered. The best method to prevent reluxation is to make the unbroken portion of the rim a support for the head of the femur, and to

secure immobility to the hip-joint, by applying a permanent dressing, including the pelvis and both lower extremities. When the depth of the rim is not sufficient to prevent reluxation by muscular contraction, permanent extension and fixation are necessary for the maintenance of the bone *in situ*.

12. *McGraw on a Recent Colles' Fracture.*—The opportunity of examining a recent Colles' fracture at a necropsy was afforded to Dr. Theodore A. McGraw, of Detroit, Michigan (*Detroit Lancet*, Dec. 1880). The patient, aged 60, had sustained a fall, and, in addition to a traumatic aneurism of the gluteal artery, had fractured the radius. At the *post mortem* examination, the ulna was found in its place. No ligaments anywhere around the joints were broken or injured in the least, neither was there any extravasation of blood near the fracture. The lower end of the radius was broken into four fragments, which, however, were held together by the periosteum and ligaments. They were broken off the shaft just one half inch from the articular surface, and were inclined back with the characteristic deformity. It was with difficulty that they could be brought into proper apposition, and only by first making traction, and then bending towards the palmar surface. It was evident that they were held in their acquired position by bony impaction and by nothing else. It was difficult even when the bones were bare of flesh to get much crepitus, owing to the spongy consistency of the bone at that point. Three of the lower fragments formed the dorsal rim of the articular cavity. The fracture had been undoubtedly produced by the sudden flexion of the hand and wrist upon the posterior edge of the radius.

13. *Szuman on Amputation of the Breast by a Bloodless Method.*—In No. 30 of *Centralb. für Chir.*, 1880, Leisrink has mentioned a screw-compressor, which he has used twice in removing the breast, to make the operation quite bloodless. This apparatus consists of a flattened U-shaped iron, the vertically standing arms of which are placed in the holes of a straight iron staff. The latter, as soon as the female screws are applied to the vertical arms and screwed, presses the base of the breast against the horizontal bar of the apparatus, making the breast free from blood. Szuman recommends (*ibid.*, No. 40) a process to make the amputation bloodless, which can be used not only with a pendulous breast, but with any other. He operated on a medullary sarcoma of the breast with a broad and flabby base, in the following manner. The base of the breast was pierced close to the thorax three times by means of a long straight needle, which was armed with a double and very strong silk thread; the threads were then fastened in such a manner that the base of the breast was divided into four parts, constricted by ligatures, and thus made free from blood. Above the ligatures, the tumour was removed, the veins tied, and the wound sewn together. Complete union by first intention was obtained.

14. *Wagstaffe on Lengthening of the Limb as a Result of Disease of the Knee-joint.*—Mr. Wagstaffe sums up a paper in the *St. Thomas's Hospital Reports* (vol. x, 1880), with the following conclusions. —1. Long standing disease of the knee-joint in young and quickly growing subjects is frequently attended with some modification in the length of the limb. 2. Abnormal lengthening of either femur or tibia is more commonly found than deficiency in length of these bones. 3. The femur is most usually the seat of this abnormal increase in length. 4. Abnormal increase in length of one long bone at the knee-joint may be attended with some or no abnormality in the length of the other bone. 5. It is more usual to find only one bone affected. 6. The amount of lengthening of the femur varied from .6 to 3.1 centimètres, and the average in the cases where lengthening was found was nearly 2 centimètres or 1.1 centimètres in the total number of cases examined. 7. Marked abnormality in the length of a bone must be looked upon as presumptive evidence of disease, or the effect of disease in that bone, in this class of cases. 8. When marked increase in length has taken place in one bone, that bone is probably the seat of active inflammatory disease along the epiphysial line. Where the distal bone is diminished in length comparatively, such diminution may be due to destructive disease in the bone itself, or to interference in its nutrition, as a consequence of disease in the proximal bone or the joint. 9. Where, after long-standing knee-joint disease in young subjects, no abnormality in length is found, it may be anticipated that the disease has been synovial rather than bony. 10. How far these abnormalities are permanent, is only a matter of conjecture at present. 11. Careful measurements of the bones may be of great service in localising and indicating the character of chronic joint-disease in young and growing subjects.

15. *Studsgaard on Colotomy.*—In an article in the *Hospitals-Tidende*, series 2, Band vii, Dr. C. Studsgaard examines the merits of the two operations—anterior colotomy or laparo-colotomy, and posterior or lumbar colotomy. He gives the preference to the former (Littré's method), especially since the use of antiseptics has materially diminished the danger of opening the operation. Costallat's advice to perform the operation in two stages—the bowel being first opened some days after the incision is made, in order that the edges of the incision in the abdomen may granulate before they come into contact with the fæcal matter, and that the risk of diffuse inflammation may be diminished—he regards as rational, provided that the urgency of the symptoms of ileus do not demand immediate relief, in which case he considers it quite superfluous to open the bowel with the cautery instead of the knife. Cauterisation of the wound with a 10 per cent. solution of chloride of zinc is sufficient to obviate infection, the more so as it is only in exceptional cases that fæcal matter passes in the first days. The incision in the intestine should be 1¼ inches long; not smaller, in order to give room for the passage of fæces; nor, if possible, larger, lest prolapse of the mucous membrane of the bowel should occur. The size, however, which should be given to the opening in the bowel must in some measure depend on the indications for the operation. In cases where it is difficult to be certain that the function of the fistula will be permanent, Dr. Studsgaard has modified the application of sutures to the intestine. The lowest sutures are introduced into the intestine in such a way, that a great part in front lies free between two corresponding sutures, while the posterior ones are passed through the bowel closer to one another in the neighbourhood of the mesentery; in this way a kind of spur is left at the lower angle, which will obstruct the passage of fæces into the rectum. Dr. Studsgaard finally relates seven cures of anterior colotomy performed by him in the Communal Hospital of Copenhagen. Of the patients, two died in the hospital and five were discharged, one of whom died six months afterwards of metastasic cancer.

PATHOLOGY.

RECENT PAPERS.

1. GAREL, J.—On a Case of Tumour of the Tricuspid Valve. (*Revue Mensuelle de Méd. et de Chir.*, Nov. 1880.)
2. MARTIN, H.—On the Pathogenesis of the Atheromatous Lesions of the Arteries. (*Revue de Méd.*, Jan. 1881.)
3. SAUNDBY, R.—On the Histology of Granular Kidney. (*Trans. Path. Soc.*, 1880; and *Jour. of Anat. and Physiol.*, Jan. 1881.)
4. SAUNDBY, R.—On the Occurrence of Dropsy in Granular Kidney. (*Birmingham Med. Rev.*, Jan. 1881.)
5. WETTERGREN, C.—A Case of Polypous Epithelioma of the Vulva. (*Hygeia*, 1880, and *Nord. Med. Arkiv*, Band xii.)
6. HOLL.—On the Etiology of Congenital Flat-Foot. *Archiv für Klin. Chir.*, Band xxv, Heft 4.)
7. UNNA.—The Black Point in Comedones. (Virchow's *Archiv*, Band lxxxii.)
8. LANNELONGUE.—On Coxalgia. (*Bull. de la Soc. de Chir.*)
9. O'SULLIVAN, S.—On a Case of Congenital Malformation of the Heart. (*Dublin Jour. of Med. Science*, April 1880.)
10. HUTCHINSON, JONATHAN.—On the Local Origin of Cancer. (*Med. Times and Gaz.*)
11. EKLAND.—On the True Cause of Miasmatic Contagious Phthisis and Chronic Pneumonia, and means for their Prevention. (Stockholm, 1880.)
12. GAUCHER.—On the Albuminuria of Diphtheria. (Société de Biologie, Jan. 7 and 22, 1881.)
13. LABORDE.—On Nerve-Stretching in Epilepsy. (Société de Biologie, Jan. 22, 1881.)
14. GIBSON, G. A.—On Valvular Hæmatoma. (*Jour. of Anat.*, vol. xiv.)
15. BAUMGARTEN, PAUL A.—On the Relations of Perlsucht and Tubercle. (*Berl. Klin. Woch.*, Dec. 6, 1880.)
16. MOYES.—On Embolism of the Inferior Mesenteric Artery. (*Glasgow Med. Jour.*, Dec. 1880.)

1. *Garel on a Case of Tumour of the Tricuspid Valve.*—M. Garel (*Rev. Mens. de Méd. et de Chir.*, Nov. 1880) narrates a case of lung-disease, in which jugular pulsation was accompanied by accentuation of the second sound. No other stethoscopic signs were present. After death, the tricuspid valve was found to be the seat of vegetations, and on that segment nearest the pulmonary artery there was a small tumour of cauliflower-shape. Microscopic examination showed that it was an extravasation of blood into the tissue of the valve, which had undergone fibrous transformation, and become in part calcified.

2. *Martin on the Pathogenesis of Atheromatous Lesions of the Arteries.*—M. H. Martin (*Rev. de Méd.*, Jan. 1881) describes a case of atheroma of the ascending aorta in a boy of 9 years. In this case, the external and middle coats were perfectly healthy, and exactly opposite to the atheromatous patch there was obliterative endarteritis of the nutrient vessel of the aortic wall. The lesion of the intima was clearly secondary to the inflammatory change of the small vessel, and an important light is thus thrown upon the pathogeny of atheroma.

3. *Saundby on the Histology of Granular Kidney.*—Dr. R. Saundby (*Trans. Path. Soc.*, 1880) points out that the lesion in granular kidney is a diffuse inflammation, involving the parenchyma, as well as the interstitial tissue. The former suffers more in acute, the latter in chronic inflammation; from the acute, the larger pale kidney results; and from the chronic the smaller red form, as the two extremes. The many intermediate forms of granular kidney confirm this, and the experiments of Grawitz and Israel also prove the same. The author goes on to show that the epithelium of the convoluted tube proliferates, and fills the tubes with cells, which either (1) become fibrous tissue, by fusiform elongation; (2) change into myxomatous connective tissue; or (3) undergo fatty degeneration, and disappear. The basement-membrane merges in the new tissue. The straight tubes have the same changes; but from their less bulk give but small shrinking finally. The epithelioid lining of the Malpighian bodies, both parietal and covering, proliferates, and a gelatinous mass is produced. The vessels, which are very often dilated, show the epithelioid lining to be thickened and fibrillated, the internal elastic lamina swollen and nucleated, the muscular coat often, but not always, greatly increased, and the adventitia enormously thickened, and merging in the surrounding tissue. The connective tissue is not fully discussed, and the reader is referred to the following paper. In the *Jour. of Anat. and Physiol.*, Jan. 1881, Dr. Saundby narrates the case of a woman who died of coma, said to have begun as an epileptic fit. At the necropsy the brain was pale; there were mitral stenosis and cirrhosis of the liver; and the kidneys were granular and inflamed. The microscopic appearances were as described above, with the important addition that the intertubular stroma contained numerous lymphoid cells. These are caused by passing attacks of congestion, and are not recognised, because death rarely takes place until the disease is far advanced, or it occurs from some cause unconnected with the kidney. The author concludes that the disease is 'a very chronic diffuse inflammatory process, liable to transient exacerbations, and leading to retrogressive metamorphosis of the higher tissues, together with quantitative increase of the lower'.

4. *Saundby on the Occurrence of Dropsy in Granular Kidney.*—Dr. Saundby (*Birm. Med. Rev.*, Jan. 1881) states that, of 98 cases of granular kidney, seen in the *post mortem* theatre, 25 had œdema, and 73 none. Of the former, 13 were diagnosed during life; of the latter only 9. The great bulk of the latter died of intercurrent affections, which cut life short. Of the 25 cases, none died of any such causes, and of them, 19 had larger pale kidneys, weighing over 8 oz., and 6 had the smaller red form, under that weight. Of the 73 cases, most died of other affections, only 22 going on to the full termination of granular kidney without dropsy, against 25 with it. The author concludes that, when the disease runs on to its natural end, dropsy is more frequently present than absent, and that it is more often associated with the larger than the smaller form of granular kidney.

GEO. A. GIBSON, M.B.

5. *Wettergren on a Case of Polypous Epithelioma of the Vulva.*—Dr. Carl Wettergren relates (*Hygeia*, 1880; and *Nordiskt Med. Arkiv*, Band xii, Häft 4) a case of epithelioma polyposum of the vulva occurring in a woman aged 39, who first observed the tumour nine-and-a-half weeks before the operation, and three weeks before labour. After her delivery it grew rapidly, and, at the time of operation, was as large as a small hen's egg; it was trilateral, in consequence of its position in the fold between the right labium majus and the thigh; it had a blue-red colour, a hard but brittle consistence, and a moist smooth exterior. It was pedunculated; and on microscopic examination shewed a completely epitheliomatous structure. There was no return of the

disease after operation. The author records the case as an example of a somewhat rare form of epithelioma.

6. *Holl on the Etiology of Congenital Flat-Foot.*—This author has noticed (*Arch. für Klin. Chir.*, Band xxv, Heft 4), in addition to the usually described causes of the above deformity, a cartilaginous union between the calcaneum and the scaphoid. In the cartilaginous substance are scattered bony nodules. He has diagnosed this condition in the living subject by the absolute immobility of the scaphoid in relation to the calcaneum.

7. *Unna on the Black Point in Comedones.*—Although it is generally supposed that the black point of comedones consists of accumulated dirt, the author (Virchow's *Archiv*, Band lxxxii, s. 175) has not, in numerous microscopical and microchemical examinations, been able to discover in it the usual constituents of dirt. He remarks, also, that the black point lies underneath a layer of epidermis, and frequently comes into view only when an unpigmented horny layer has been scraped through. It consists of a soft sebum-like centre, surrounded by a firm capsule of horny epithelium. The colour comes from two sources. That of the so-called 'head' of the comedo is produced by a diffuse pigmentation of the horny cells composing it, while that of the part lying underneath the head is caused by free pigment-granules. These granules vary much in number, colour, and size, producing tints somewhat like those of blond, brown, and black hair. He distinguishes three kinds of granules—blue, brown, and black—all decolorised in and, with heat, dissolved by hydrochloric and nitric acids, or, more readily, by a mixture of these acids, making it absolutely certain, therefore, that this colouring matter is not of a carbonaceous nature. The blue granules are readily soluble in acids, and are believed by the author to be of the nature of ultramarine.

James Anderson, M.D.

8. *Lannelongue on Coxalgia.*—At the Société de Chirurgie (*Bulletin de la Société de Chirurgie*), M. Lannelongue stated he had made a *post mortem* examination on a girl, 5½ years of age, who had been under his care with symptoms of coxalgia, death ultimately resulting from diphtheria. Nothing abnormal was found in or around the coccyx, nor in the hip-joint; but, on cutting the head of the femur, immediately beneath the epiphysal cartilage, a small caseous abscess was found, and a further examination showed tubercular granulations in the marrow of the bone. M. Lannelongue thinks that tubercle in bone is more frequent than is supposed. It may give rise to pain or not; when pain is experienced, it is due to the osteitis set up. T. F. Chavasse, M.D.

9. *O'Sullivan on Congenital Malformation of the Heart.*—The subject of the malformation (*Dublin Jour. of Med. Science*, April 1880) was a youth 17 years of age. Nothing peculiar had been observed in his condition till he was two years of age, when he began to suffer from cyanosis and dyspnœa, which continued to increase gradually from that time till he died. His body was ill developed, especially the lower extremities, and a loud systolic bruit was audible over the entire cardiac region, increasing from the base downwards. His mental condition was of a very low type, and his articulation very imperfect. His movements were very slow; and any exertion or over-excitement, especially if in a passion, brought on a paroxysm of stupor, more or less severe, and lasting for some hours. After death, an examination of his body was made. The liver was enlarged, and engorged with venous blood, and presented an almost fœtal condition; the spleen was also enlarged. On opening the pericardium, the heart was found to be enlarged laterally, but otherwise presented a normal appearance. On opening it, however, very interesting abnormal conditions were found. The right auricle was much enlarged, and its walls thickened and highly vascular. The orifices of the venæ cavæ, though normal in position, were much enlarged, the lower one having a large and well-marked Eustachian valve. The annulus ovalis was a prominent muscular ring, and a large foramen ovale occupied the place of the fossa ovalis in the septum, between the auricles, establishing direct communication between both. There was considerable stenosis of the conus arteriosus. The ductus arteriosus Botalli was obliterated. Owing to the interventricular septum being pushed to the left, the aorta appeared to rise from the right ventricle, behind the pulmonary artery. The upper part of the septum ventriculorum was incomplete, and an opening between the ventricles was established through which the finger could be pushed. The aorta arose above this opening, thus communicating with both ventricles. The left auricle and ventricle were situated posteriorily, and the apex of the heart was found by the right ventricular wall. Both lungs were incompletely developed, especially the left, which was very small, but they were normal in form. The author, having described the case, goes on to make several very interesting and instructive remarks regarding the relation of the symptoms and condition of the patient during life to the condition found after death. J. G. Garson, M.D.

10. *Hutchinson on the Local Origin of Cancer.*—In the *Medical Times and Gazette*, a paper is printed *in extenso*, which was originally read by Mr. Jonathan Hutchinson before the Harveian Society, in 1860. It is given unaltered, although Mr. Hutchinson's views are, in some points, a little modified. The following is a summary of the paper. 'Cancerous action is to be regarded simply as a morbid form of nutrition, educed in certain temperaments, and at certain ages, by local irritation. It becomes constitutional by the direct absorption of the plasma and cell-elements of the new growth; and in proportion to the succulency of the new growth is, as a rule, the rapidity with which the blood becomes contaminated. Like all other blood-diseases, cancer in its second, or constitutional stage, is liable to be transmitted from parent to child. The worst and most rapid forms of cancer are those which occur in young persons, as the consequence of hereditary taint. In many of those who have inherited distinctly a cancerous taint, local irritation is the means of evoking such taint into activity; and in such cases the resulting disease is to be regarded partly as local, and partly as constitutional. It is a fact beyond dispute that some forms of cancer are, in their early stages, purely local, and that they are curable by local means. As in most cases it is impossible to estimate the degree of constitutional predisposition, it becomes the duty of the surgeon, whenever feasible, to give his patient the benefit of the doubt, and remove the disease immediately it is discovered, in the hope that it may prove to have been merely local.' Richard Neale, M.D.

11. *Ekland on the True Cause of Miasmatic Contagious Phthisis and Chronic Pneumonia, and Means for their Prevention.*—Dr. F. Ekland has discovered, in the sputa of phthisis, certain appearances which he regards as specific. These are: 1. Small round

lymphoid cells, usually completely filled with phthisis bacteria; 2. Round cells, like the white blood-cells or pus-corpuscles, containing three to five nuclei, and more or fewer bacteria; 3. Oval cells, also containing bacteria. These bacteria he calls 'Micrococcus phthisis dryotemenos'. He declares that these bacteria are not to be found in the secretions of persons unaffected with phthisis; but he has found them in the soil and water of districts where phthisis prevails, and in decomposing animal and vegetable matter in marshy places, so that he regards phthisis as a miasmatic as well as a contagious disease.

12. *Gaucher on the Albuminuria of Diphtheria.*—M. Gaucher (*Societé de Biologie*, Jan. 22, 1881) concludes, from his researches, that diphtheritic nephritis is of parasitic origin, as was formerly maintained by M. Ch. Bouchard. He has found the same micrococcus, during life, in the urine and the blood, and after death in the renal epithelium. These observations were made on a lad aged 15, who had never been catheterised. In the epithelium of the kidney, examined fresh, or in sections of kidney hardened in osmic acid, in the midst of the granular greyish yellow matter which infiltrated the epithelium, there were brilliant granulations resembling the mobile micrococcus found in the blood and urine. He regards this as evidence of an attempt of nature to eliminate the poison by the urinary secretion.

13. *Laborde on Nerve-Stretching in Epilepsy.*—M. Laborde (*Soc. de Biologie*, Jan. 22, 1881) showed a guinea-pig, in which spinal and general epilepsy had been induced by section of the spinal cord. The spinal epilepsy had been made to disappear completely, by stretching one of the sciatic nerves.

14. *Gibson on Valvular Hæmatoma.*—Dr. G. A. Gibson (*Journal of Anatomy*, vol. xiv) has described a small tumour on the auricular surface of the inferior tricuspid valve, very near its attachment to the muscular wall of the heart of a sheep. The tumour was oval in outline, and measured four lines in length, and two and a-half in breadth: it was of a deep purple colour, with a smooth and glistening surface, the endocardium being everywhere perfectly healthy. After hardening, sections of the tumour were made, which, when examined under the microscope, showed that it consisted of blood-clot undergoing organisation near the proper tissue of the valve, the tumour being composed almost entirely of connective tissue, while the centre was composed of brown granular matter, the remains of broken-down blood-corpuscles.

15. *Baumgarten on the Relations of Perlsucht and Tubercle.*—Dr. Baumgarten (*Berl. Klin. Woch.*, Dec. 6th, 1880) states that he examined the bodies of over 300 rabbits, dying from various causes, and found that genuine primary general tuberculosis occurs in them occasionally, but that ordinary wounds, inflammations, etc., although followed by the local formation of caseous abscesses, do not lead to general tuberculosis. His experiments with tubercle consisted at first in the introduction of human tubercular matter into the anterior chambers of the eyes of rabbits, and were all negative. By accident, he was led to employ bovine tubercle (perlsucht), and found such inoculation to succeed in a remarkable and constant manner. Subsequent experiments with human tubercle succeeded, but not constantly; and he considers the contagiousness to vary with the length of time the tubercular matter has been left after the death of, or its removal from, the body. Negative results only followed the inoculation of a number of substances, such as cancer, sarcoma, ordinary pus, caseous non-tubercular pus, portions of hard and soft chancres, etc. He found that disinfecting the tubercular material with a two per cent. solution of carbolic acid deprived it of its virulence; and that it was necessary to break up the tubercle before inoculating it. The latter fact indicates, in his opinion, that the poison is situated in the centre of the tubercles, and is mechanically fixed there, and is therefore probably corpuscular, and of the nature of contagium vivum. He also maintains the anatomical identity of the two, persisting that, in spite of small differences, perlsucht is more like tubercle than either is like anything else, and that the major part of these differences are due to the tendency of the former to undergo calcification; but, after removing the mineral matter by means of acids, the histological structure becomes identical with that of caseous tubercle.

16. *Moyes on Embolism of the Superior Mesenteric Artery.*—Dr. Moyes (*Glasgow Med. Jour.*, Dec. 1880, p. 485) records a fatal case of embolism of the superior mesenteric artery, which occurred in a man aged 39, the subject of mitral disease. The symptoms were pain across the abdomen, just below the ribs, exacerbated at intervals, relieved by pressure; no tympanitis or tenderness on palpation; slight vomiting at first, and no diarrhœa; afterwards vomiting of black matter, and profuse diarrhœa; no blood in stools. At the necropsy there were found stenosis of the mitral valve, with rough calcareous thickenings; loosely adherent vegetations in the left auricular appendix; dilated right heart, and wide tricuspid valve; peritonitis, and deep injection of the ileum and ascending colon, which contained altered blood; the coats of the bowels were infiltrated with blood. The main stem of the superior mesenteric artery was plugged just where the colica dextra is given off. Infarctions were found in the spleen and left kidney. The paper contains a useful *resumé* of what has been written on the subject, with a list of the papers to which reference is made.

ROBERT SAUNDBY, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. BOMPIANI.—On Extirpation of the Uterus by the Vagina. (*Annali di Obstet., Ped., e Ginecol.*, Jan. 1881.)

2. CHIARLEONI.—Excessive Involution of the Uterus. (*Gaz. degli Ospitali*, Milano, Dec. 1880.)

3. DORAN, ALBAN.—A Case of Papilloma of the Fallopian Tube. (*Trans. of the Path. Soc.*, 1880.)

4. FOURCAULD, V.—Considerations on the Treatment of Diathetic Ulcerations of the Cervix Uteri. (*Ann. de Gynécol.*, Feb. 1881.)

5. LUSK, W. T.—On the Management of the Second Stage of Natural Labour. (*New York Med. Jour.*, Dec. 1880.)

6. PAGGI.—Contribution to the Study of Membranous Dysmenorrhœa.

7. REIN.—On the Mode of Incising the Uterus in Porro's Operation. (*Ann. de Gynécol.*, Feb. 1881.)

8. RICHARDSON, ELLIOTT.—A Successful Case of Porro's Operation. (*Amer. Jour. of Med. Science*, Jan. 1881.)

9. SKENE, A. J. C.—On the Diseases of the Glands of the Female Urethra. (*Chicago Med. Jour.*, Feb. 1881.)

10. SMITH, W. G.—Herpes Gestationis. (*Dublin Obstet. Soc.*, Dec. 11, 1880.)

11. SYMPSON, T.—Inversion of the Uterus. (*Brit. Med. Jour.*, Feb. 12, 1881.)

12. TAIT, LAWSON.—An Account of Seventy-six Cases of Abdominal Section.

13. WILSON, H. P. C.—A Case of Combined Intra-uterine and Abdominal Pregnancy. (*Amer. Jour. of Obstet.*, Oct. 1880.)

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3. *Doran on Papilloma of the Fallopian Tube.*—The patient, aged 50, single, experienced a severe attack of menorrhagia following amenorrhœa. There were symptoms of inflammation of the right ovary, local pain, vomiting, dysuria, constipation, and high fever. Some months later she had pleurisy, and was tapped. Later still, the abdomen swelled, and sixteen pints of ascitic fluid were drawn off by the trocar and cannula. She was finally seen by Mr. Spencer Wells, who recommended an exploratory incision. As the patient objected, the abdomen was again tapped, and about twenty-two pints of fluid drawn off. On examination after the tapping, a hard nodular mass was felt behind the uterus. There was also fluid in the right pleural cavity. Clusters of proliferating cells were found both in the pleural and peritoneal fluid. On April 29th, 1879, Mr. Spencer Wells operated under strict antiseptic precautions. When the peritoneum was opened, seventeen pints of amber opalescent fluid escaped. The left ovary was normal; to the right of the uterus a tumour was found, the size of a large orange, and consisting of the greater part of the right Fallopian tube. The ovary could be distinctly felt behind it. The tube and ovarian ligament were secured by silk ligatures, and removed, together with the ovary which adhered to it. No secondary deposits were found in the peritoneum. The patient recovered, and is now in perfect health. On laying the tumour open, it was found to be filled with cauliflower excrescences. About an inch of the innermost portion of the tube remained undilated and quite pervious. The remainder formed an elongated oval tumour three and a half inches long, two in vertical measurement, and over two in thickness antero-posteriorly. The fimbriæ were thickened and shortened. One inch internal to the orifice was a small pedunculated cystic body, which from its position was probably the 'hydatid', believed to represent the extremity of Müller's duct. But Mr. Doran has observed similar growths in numbers on the surface of dilated Fallopian tubes far from the fimbriæ. On microscopic examination, Mr. Doran found the cauliflower growths covered with countless secondary offshoots. The limitation of epithelium to free surfaces was sufficient to show that the specimen was of a purely papillomatous and non-cancerous nature. The open condition of the fimbriated extremity of the Fallopian tube is a very unusual feature; indeed, Cruveilhier states that in dropsical distension obliteration of that extremity is constant. The continuous flow of free mucous discharge, from the earliest stage of disease, probably accounts for the patency of the abdominal aperture in this case. Had the discharge been scantier and intermittent, the fimbriæ might have adhered to each other and sealed up the tube. Then the tumour would have attained a great size, but ascites would less probably have supervened, since no discharge would have escaped into the peritoneum so as to irritate that serous membrane, and spread a morbid influence as far as the right pleura.

5. *Lusk on the Second Stage of Labour.*—Professor W. T. Lusk concludes his paper with the following remarks respecting ligation of the cord. 1. The cord should not be tied until the child has breathed vigorously a few times. When there is no occasion for haste arising out of the condition of the mother, it is safer to wait until the pulsations of the cord have ceased altogether. 2. Late ligation is not dangerous to the child. From the excess of blood contained in the fœtal portion of the placenta, the child receives into its system only the amount requisite to supply the needs created by the opening up of the pulmonary circulation. 3. Until further observations have been made, the practice of employing uterine expression previously to tying the cord is questionable. 4. In children born pale and anæmic, suffering at birth from syncope, late ligation furnishes an invaluable means of restoring the equilibrium of the fœtal circulation.

6. *Paggi on Membranous Dysmenorrhœa.*—Dr. Paggi thinks it clearly shown that there are five different varieties of so-called dysmenorrhœal membranes; 1. Decolorised fibrinous coagula; 2. Mucus coagulated and mixed with more or less figured elements; 3. Detached fragments of uterine mucous membrane; 4. Products of true abortions; 5. Membranes from the vaginal mucous membrane. In the treatment, success can obviously only be obtained by means directed to each special case. It is because physicians have failed to make a correct diagnosis, that in some cases remedies which have succeeded in the hands of some have failed in the hands of others. This has been because the remedy which cured one variety was useless in the other. Hence, while Tilt extols cauterisation of the uterine cavity with nitrate of silver, Scanzoni declares that he has obtained no amelioration from its use. Paggi has found scarification of the os uteri useful in those cases of membranous dysmenorrhœa which are accompanied by inflammation of the uterine tissues. In one case, associated with chronic parenchymatous metritis, a cure was obtained by Professor Depaul by applying the actual cautery to the uterine cavity.

7. *Rein on the Method of Incising the Uterus in Porro's Operation.*—Dr. Rein of St. Petersburg, writes to the editor of the *Annales de Gynécol.* to advise as follows. 1. The incision of the abdominal walls need not be larger than in the ordinary Cæsarean section. 2. The elastic constrictor of Esmarch should be applied round the uterine neck *in situ*. 3. The incision should be rapidly made through the uterine wall, and the fœtus extracted. 4. The amputation of the uterus, drawn out with the placenta, should be supravaginal, after the method of Péan. 5. The abdominal wound should be sutured, and the uterine pedicle fixed in the lower angle of the wound.

8. *Richardson on Porro's Operation.*—Dr. Richardson relates a case in which he successfully performed Porro's operation on a dwarf, aged 25. The point upon which Dr. Richardson lays stress is the opening the uterus *in situ*, not drawing it forward out of the abdomen, as Porro does, before incising it. [Dr. Richardson states that Müller was the first to incise the uterus before drawing it out of the abdomen. He, therefore, when this is done, calls it the Porro-Müller operation. This is not justifiable. The whole credit of the operation is Porro's, and the addition of trivial modifications does not alter the main features of the operation, and certainly does not warrant the tacking on of the various modifiers' names to that of the author of the operation.—*Rep.*]

10. *Smith on Herpes Gestationis.*—Dr. W. G. Smith relates the case of a lady who had herpes during two pregnancies. The eruption first appeared round the umbilicus, and then rapidly extended over

the legs and arms, and over the chin. Within the first week after parturition, the eruption underwent a great aggravation, and spread over the chest and abdomen. Large vesicles and bullæ formed, some of the size of a sixpence; and, on puncturing them, clear fluid spurted out with force. After each delivery that was preceded by the eruption, the nails fell off the hands and feet, but never on any other occasion. Dr. Smith states that his case makes only the fifteenth of this curious affection on record. The disease is termed hydroa gestationis by Dr. Liveing.

13. *Wilson on a Case of Combined Intra-uterine and Abdominal Twin Pregnancy.*—Mrs. B., aged 24, had been delivered of three living children. On April 15th, 1880, she was delivered of a fourth child, a girl, one month exactly before her expected confinement. The child's appearance confirmed the mother's statement, for it was evidently premature. The labour was attended by a midwife, who said it was natural and quick. Mrs. B. and the midwife agreed that there was a second child within her, and, as it did not make its appearance, they sent for Dr. Chatard, who sent for his father. They agreed there was another child, but could not make out its exact habitation. On April 18th, three days after the labour, Dr. Wilson saw the patient in consultation with Dr. Chatard, junior. She was put under chloroform, and Dr. Wilson passed his hand into the uterus, which was empty. With one hand in the uterus and the other above the pubes, the spherical mass of an extra-uterine fœtation could be made out. The fœtal heart could not be heard. The movements of the child were felt, and, as the tumour was movable without corresponding motion in the uterus, Dr. Wilson was satisfied that the case was one of abdominal pregnancy. It was agreed that laparotomy should be performed in the interest of the mother and child, as near as possible to the time of expected confinement (May 15th). On Tuesday, May 11th, she was operated on at St. Vincent's Hospital. When under chloroform, Dr. Wilson found that a sound passed into the uterus reached up to under the lower surface of the liver. The incision through the abdominal wall was made in the median line from three inches above the umbilicus to three inches below it. On entering the abdominal cavity, there was no escape of fluid. A tumour was felt exactly like an ovarian tumour, within which a hard irregular mass could be felt floating. In attempting to break down some adhesions, the sore ruptured, and some dirty yellowish amniotic fluid poured out. The patient was turned on to her side to allow the fluid to drain off. The sac was then opened by a bistoury to the extent of the abdominal incision. A live male child, weighing eight pounds, was then extracted by the breech. The cord was tied by two ligatures. The sac was found to vary in thickness from one-sixth to one-tenth of an inch. It was adherent to the abdominal walls in front and to the right. It was very fragile at the point of incision. The canal traversed by the sound before the operation was found to be the upper portion of the uterus which had been held in an uncontracted state by the sac being adherent to it. It was impossible to ascertain the attachment of the placenta. The sac was sewn to the abdominal incision, which was closed with silver-wire sutures. The lower angle was left open about an inch. The sac was thoroughly treated with carbolic spray, and cleansed with carbolised sponges before being closed. Complete antiseptic precautions were adopted. The operation was almost bloodless. The external portion of the cord was wrapped in linen soaked in carbolised oil. On May 14th, a bulging mass was felt in front of the abdominal opening, which felt like the placenta trying to escape. It was clear that, unless the immense mass of decaying matter which was within the woman's abdomen could be speedily removed, she must inevitably die from blood-poisoning. The stitches were cut, and the hand, carried into the sac through the gaping wound, made an effort to deliver the placenta. The edges of the incision, for its lower third, were disunited. The placenta was found to be too adherent to admit of removal. The gaping wound was filled in tightly with absorbing cotton, squeezed out of carbolised water with a compress over this, and a bandage over all. The wound was not re-closed. On May 15th, the patient died at 7.30 A.M. At the *post mortem* examination, the sac was found to be firmly united to the abdominal walls on the right side; less firmly on the left. Above, it was attached to the omentum and transverse colon; on the left and behind, to the small intestines and descending colon. It was also attached on the right to the fundus of the uterus. The afterbirth consisted of three placentæ only united by membranes, on which three distinct sets of vessels, coming from a common cord, were conducted to each placenta. One placenta was about as large as the other two together. It was about six by four inches in length and breadth, and about two inches thick. The two smaller ones looked something like enlarged kidneys. The placentæ were attached to the fundus and left side of the uterus, the left Fallopian tube, and upper part of the left broad ligament, and occupied the left side of the brim of the pelvis, and a portion of the left iliac fossa. There was no indication of the slightest separation of the placentæ; they were only separated from their attachments by considerable force, and with such separation there was a discharge of fully a pint and a half of very dark and apparently watery blood. Dr. Wilson is of opinion that the death resulted from embolism. Both children are alive and well.

FANCOURT BARNES, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

1. WETTERGREN, C.—Hypertrophic Cirrhosis of the Liver in a Child four years old. (*Hygeia*, 1880, and *Nord. Med. Arkiv*, Band xii, Heft 4.)

2. SCHEPELERN, L. V.—A Case of Polysarcia in a Child. (*Hospitals-Tidende*, series 2, Band vii.)

3. HIRSCHSPRUNG.—A Peculiar Form of Rheumatic Fever in Childhood. (*Hospitals-Tidende*, ser. 2, Band vii.)

4. GRAWITZ.—On Congenital Bronchiectasis. (Virchow's *Archiv*, Band lxxxii, Heft 2.)

5. TYSON.—On Abdominal Rheumatism Simulating Nephritic Colic and Peritonitis in a Child. (*Phil. Med. Times.*)

6. CROFT.—On Tracheotomy in a Child under Ten Months Old. (*Lancet*, Nov. 1880, p. 849.)

7. FINLAY.—On Galvanism in Infantile Paralysis. (*Med. Times and Gaz.*, Jan. 1881, p. 36.)

1. *Wettergren on Hypertrophic Cirrhosis of the Liver in a Child.*—This case is described by Dr. C. Wettergren in *Hygeia* for 1880 (*Nord. Med. Arkiv*, Band xii, Häft 4). The subject was a child, aged 5, the son of a poor and intemperate labourer. He was fed principally at his mother's breast till he was 4

years old, after which coffee was his favourite food. Early in 1879, he suffered from vomiting, pains in the epigastrium and right hypochondrium, and gripings in the abdomen. When Dr. Wettergren first saw him, in August 1879, he had a highly cachectic appearance. His hue was greyish yellow, his cheeks were sunken, and there was complete atrophy of the muscles. The abdomen was distended, and presented dilated subcutaneous veins. In the epigastrium was felt a hard resisting body, with a sharp lower border. The hepatic dulness extended 3 centimètres (1.2 inches) below the ribs on the right side, passed into the above-named resisting body in the epigastrium, and became confluent on the left with the cardiac dulness. The spleen was large; there was some ascites; no dropsy elsewhere. The urine was yellow, and free from foreign constituents. The heart and lungs were healthy. Syphilis could not be traced, and he had not had ague. Under treatment, the local symptoms improved, but his general condition remained the same. In December he became worse, lost his appetite, had pains in the right hypochondrium, slight icterus, and dropsy, with mucous bronchitis, and died on the 14th of the month. At the necropsy, a small amount of ascitic fluid was found in the abdomen. The liver measured 18 centimètres (7.2 inches) in length, 11 centimètres (4.4 inches) in breadth, and the same in thickness. Externally it was of a yellow grey colour, somewhat knobby and firm. The surface of sections was smooth and even, of a variegated yellow grey colour, with broad, firm, whitish grey trabeculæ of connective tissue surrounding large groups of acini, in which were fine gelatinous greyish streaks among the different acini, which were in some parts preserved, while in other parts only a pale yellow brown colouring indicated their former existence. In several parts, there was nothing but smooth connective tissue. Nowhere was there any noticeable contraction of the connective tissue, or consequent granulation. The spleen was enlarged to three times its normal size. The stomach and intestines were filled with gas. There was capillary bronchitis at the posterior parts of the lungs. The author mentions Hanot's views on hypertrophic cirrhosis of the liver, and remarks that Dr. S. West has described, in *St. Bartholomew's Hospital Reports* for 1877, two cases of hypertrophic cirrhosis, one of which occurred in a child 6 years old. As a possible cause of the disease, he refers to the use of coffee by the child.

2. *Schepelern on a Case of Polysarcia in a Child.*—Herr L. V. Schepelern describes, in the *Hospitals-Tidende*, series 2, Band vii, the case of a girl, aged 9, who was admitted into the hospital at Refsnäs. There was no hereditary tendency to disease in the family. At the age of 1½ year she had scarlatina, which was followed by paresis of the left arm and leg. From her fourth year there was gradually developed an unnatural fatness, especially in the cheeks, breasts, and thighs. The skin was everywhere natural; there was no anæmia; the muscular power was impaired in the paretic limbs. She stammered much, and was mentally backward in other respects. There were no abnormal digestive symptoms. Her weight was 61,500 grammes (24 lbs. 14½ oz. avoirdupois); her height was 142 centimètres (56 inches). No shortness of breath or tendency to sweat was observed. The child was put on what may be called a modified Banting's diet, with a scanty supply of fat and carbo-hydrates in proportion to the albuminous substances. Passive muscular movements and baths of iodide of potassium were also used. Under this treatment, the patient, in the course of some months, lost considerably in weight, the adipose layer became scarcely greater than normal, and her general health at the same time improved. This improvement continued even after she had returned to ordinary food; but a relapse to her former condition appears to have taken place after she left the hospital.

3. *Hirschsprung on a Peculiar Form of Rheumatic Fever in Childhood.*—Dr. Hirschsprung (*Hospitals-Tidende*, series 2, Band vii) comments on the peculiarities of rheumatic fever in children, and refers to the form of the disease to which attention was first called by Meynet, which is characterised by more or less extensive affection of the sheaths of the tendons, and of the fibrous tissue. He has observed three cases. The rheumatic fever in these cases was not very intense, but was prolonged. Relapse occurs in most of the cases, and the cardiac symptoms are severe. At a varying time in the disease, swellings of various sizes, and in various numbers, appear in the tendons and their sheaths, or in parts where portions of bone lie close under the skin, as the patella, the malleoli, the spinous processes, or the skull. They are as hard as cartilage or bone. They often disappear spontaneously. In very few cases is there any remarkable tenderness or pain in the part, and only exceptionally a slight redness of the skin. The fever does not seem to have any definite relation to the outbreak, and it cannot be decided whether the deposits are confined to the region of the affected limb. In one of the author's cases, the child died of heart disease, and the necropsy showed that the nodules, which appeared to proceed from the tendons, might be regarded as consisting of a new growth of connective tissue, most like the result of chronic inflammation, with some tendency to necrobiosis.

4. *Grawitz on Congenital Bronchiectasis.*—Dr. P. Grawitz (Virchow's *Archiv*, Band lxxxii, Heft 2) publishes a fresh case of bronchiectasis in the lower lobe of the right lung of a still-born child. The lobe did not communicate with the trachea, and the chambers of which it was composed were lined with ciliated epithelium. He also reprints several other cases collected from various sources, and argues in favour of the congenital origin of many of these cases, especially in children and young people.

ROBERT SAUNDBY, M.D.

5. *Tyson on Abdominal Rheumatism, Simulating Nephritic Colic and Peritonitis in a Child.*—Dr. James Tyson reports the following case in the *Phil. Med. Times* (*Boston Med. and Surg. Jour.*, September 1880). He was called to see a girl, aged 8 years, whom he found with high fever, and complaining of a sharp pain in the præcordium, accompanied also by oppression, which suggested pericarditis. A careful examination of the heart and lungs showed neither to be involved, and he concluded that the pain was muscular. In forty-eight hours it had yielded to simple counter-irritation by mustard and an aconite fever-mixture. But, at his visit thirty-six hours after he was first called, she complained of a little abdominal pain. The next morning the chest was quite free from pain, but the abdominal pain had increased. There was also a sharp pain in the lumbar region radiating to that of the bladder, which, indeed, was the focus of greatest pain. The urine was very concentrated, high-coloured, and acid in reaction. She had previously had a similar attack, with high-coloured scalding urine, and painful micturition, under the

care of another physician. These facts inclined Dr. Tyson to believe that she was suffering from nephritic colic. Hourly doses of paregoric and an alkaline diuretic mixture during the day failed to give her relief by evening. The anodyne and alkaline mixtures were continued during the night, with poultices, but morning came without relief. Her suffering was now extreme. Dr. Tyson increased the anodyne without effect, but by four p.m. her pain was so great that he thought it best to etherise her. At the same time, he gave her five-drop doses of laudanum every half-hour. By the time she had five doses she dropped off to sleep, and was sleeping quietly at nine in the evening, when he visited her. The next morning the pains had returned. He now had her bladder sounded by Dr. Charles T. Hunter, who found it free from any foreign body. At this time the knees were drawn up, the thighs were flexed upon the abdomen, and the legs upon the thighs, and any attempt to straighten them caused the extremest torture; the belly was a little swollen, but the pulse did not exceed 100 deg., and was not quick or irritable. The decided fever with which the attack commenced had long before disappeared. Dr. Tyson continued the poultices and laudanum in sufficient dose to subdue the pain. A good night was secured by two doses of laudanum of five drops each. The next morning the abdomen was perfectly flat, or rather concave. The pain had almost completely passed away, and one-fourth of a grain of opium every three hours was sufficient to keep it in abeyance. In the evening she was free from abdominal pain, but complained of pain in her knee- and ankle-joints, so that she could not straighten her limbs without much suffering, which was not in her abdomen. The next day all the joints of the lower extremity were involved—the hips, knee, and ankle-joints—while the abdomen was free from pain. This made it certain that the attack was rheumatic. Under the use of salicylic acid, these symptoms rapidly disappeared, and ten days after the first symptoms appeared she had completely recovered. The interest which attaches to this case lies in the fact that the rheumatism of the abdominal walls was a condition which in some respects resembles peritonitis; and while important symptoms were wanting, the resemblance of others was so very close as to cause much anxiety.

6. *Croft on Tracheotomy in a Child under Six Months Old.*—In the *Lancet*, Nov. 1880, p. 849, a successful case of tracheotomy at an early age is reported by Mr. Croft, the operation being necessitated on account of erysipelatous inflammation and œdema of the whole cervical region and upper part of the chest. The child, aged six months, did well. [An interesting article upon tracheotomy in infants, based upon a case, aged nine weeks, by Dr. Steinmeyer, may be read with advantage in the *Medical Times and Gazette*, November 1880, p. 593.—*Rep.*]

7. *Finlay on Galvanism in Infantile Paralysis.*—In the *Med. Times and Gaz.*, Jan. 1881, p. 36, a case of Dr. Finlay's well illustrates the value of galvanism in some cases of infantile paralysis. A child was admitted into the Middlesex Hospital six days after having suddenly, during perfect health, lost the power of both legs. Control of the sphincters was unimpaired, the urine was normal, and the tongue clean and moist. The temperature was 98 deg. and the pulse 100. Four days after admission galvanism was commenced, ten cells of Leclanché's battery being used for four days, afterwards twenty-five cells. For several days no apparent effect was produced, but gradually some reaction was noticed; and, after a month's use of galvanism and frictions, the child could straighten both legs, more or less. For a month subsequently little change was noticed, but then the muscular power began gradually to return, and when she was discharged, four months after admission, she could move about without assistance, but continued to fall about a great deal for several weeks. When seen, two months after leaving the hospital, she could run and walk perfectly well. Dr. Finlay credits the galvanic treatment with a large share of the success obtained in this case.

RICHARD NEALE, M.D.

ANATOMY.

RECENT PAPERS.

1. DALTON, J. C.—On Cerebral Anatomy, with Special Reference to the Form of the Corpus Striatum. (*Annals of the Anat. and Surg. Soc.*, Jan. 7, 1880.)

2. WYETH, J. A.—The Anatomical Reasons for Dextral Preference in Man. (*Ibid.*, vol. ii, No. 4, p. 121.)

3. SCHWALBE, G.—The Law Governing the Entrance of Nerves into Muscular Tissue. (*Arch. für Anat. und Physiol.*, 1879, p. 167.)

4. SHATTOCK, S. G.—A new Bone in Human Anatomy, together with an Investigation into the Morphological Significance of the so-called Internal Lateral Ligament of the Human Lower Jaw. (*Journ. of Anat. and Physiol.*, vol. xiv, part 2, p. 201.)

5. FRANKENHÄUSER.—On the Structure of the Tracheo-Bronchial Mucous Membrane. (*Inaugural Dissertation*, Dorpat, 1879.)

6. RETZIUS, G.—On the Organ of Hearing in Vertebrate Animals. (*Nordiskt Medicin. Arkiv*, Band xii, Häft 2.)

7. DEAN.—On Arterial Anomalies. (*New York Med. Rec.*, April 3.)

8. MASON.—On the Nuclei of the Nerve-Cells of the Spinal Cord. (*Jour. of Nervous and Mental Disease*, July 1880.)

9. IZQUIERDO.—On the Mode of Termination of the Nerves of Sensation. (*Archiv für Mikros. Anat.*)

1. *Dalton on the Anatomy of the Brain.*—The author points out the arrangement of the grey and white matter of the brain. The former is arranged in two main divisions—firstly, the exterior convolutions, forming the cortex of the brain, and spread out on its surface; and, secondly, the interior cerebral ganglia, situated at its base, and known as the corpus striatum and optic thalamus. The latter—namely, the white matter—is derived from the continuation of the longitudinal columns of the spinal cord, which pass up through the medulla oblongata to the cerebral ganglia, and then continue their course, to terminate in the convolutions. In the cerebro-spinal system there are, counting from without inwards, three principal deposits of grey matter: 1, the grey matter of the spinal cord, extending upwards on the floor of the fourth ventricle, and around the aqueduct of Sylvius, forming the grey matter of the medullary canal; 2, the cerebral ganglia at the base of the brain (that is, of the optic thalamus and the corpus striatum); and, 3, the convolutions of the hemispheres. There are also three sets of fibres forming the white matter: 1, the nerves and

nerve-roots connecting the external organs with the grey matter of the medullary canal; 2, the fibres connecting the grey matter of the medullary canal with the cerebral ganglia; and, 3, those uniting the cerebral ganglia with the convolutions of the cortex. Thus, between the cerebral convolutions as a nervous centre and the external organs, there are two intermediate stations of grey matter—namely, the cerebral ganglia (the optic thalamus and corpus striatum) and the grey matter of the medullary canal; and when a nerve-impulse passes from the convolution to external organs, or *vice versâ*, there are three successive sets of nerve-fibres which take part in the transmission. The cerebral ganglia are placed about the same level, near the base of the brain, but the optic thalamus is situated somewhat further back. They also differ physically. In the optic thalamus the white fibres are mixed with the grey substance, so that it presents a nearly uniform light grey colour throughout; but in the corpus striatum the fibres run through the grey matter in distinct bundles till near its outer border, so that it has a visible striation of alternate grey and white, as its name implies. The corpus striatum is divided into two parts—an intraventricular portion, visible from the lateral ventricles, and an extraventricular portion. The former has a bulging anterior extremity, and a slender posterior tail-like continuation, from which it is sometimes called the caudate nucleus, though it is to this portion only that the name corpus striatum is applied. The latter is embedded in the substance of the brain, and, from its lens-like appearance on section, is called the lenticular nucleus. These two portions are, for the greater part of their extent, separate, but they are united at their anterior and lower portion. At this point the grey matter of the two portions is continuous, but everywhere else the caudate nucleus is separated from the lenticular nucleus by the fan-shaped masses of white substance, ascending in an outward and upward direction from the crus cerebri, and called the internal capsule. The optic thalamus and caudate nucleus, or corpus striatum, as it is generally called, are internal to (*i.e.*, nearer the mesial plane) and above the internal capsule, while the lenticular nucleus is external to and below it, as can be seen in a vertical transverse section of the brain, about the middle of its length. Near the base of the brain, the internal capsule does not reach quite so far forward as the head of the corpus striatum, and therefore a band of grey matter exists here, connecting the two portions. The internal capsule is believed by anatomists to be formed of a succession of different fibres, some of which come from below, leaving the capsule to penetrate the cerebral ganglia, while others originate from the ganglia, and run upwards to the hemispheres. Round the crus cerebri and internal capsule are grouped the various cerebral convolutions, beginning with the gyrus fornicatus, which is the most internal, and which covers them over in a caplike manner. These convolutions are connected with the crura cerebri and the ganglia by white nerve-fibres, which diverge in all directions from the upper border of the latter, and form what is called the corona radiata. The part of the cortex nearest the ganglia is the island of Reil, which corresponds exactly to the outer surface of the lenticular nucleus. As to the special anatomy of the corpus striatum, the author states that the best description of this ganglia is to be found in Gratiolet's *Anatomie Comparée du Système Nerveux*, published in 1857, a description that is usually ignored by present writers. The real form of the corpus striatum is almost that of a complete ring. This can often be seen, without further dissection, by opening the lateral ventricle completely from the inside. The body of the corpus striatum grows smaller as it extends backwards in the upper part of the ventricle, and soon runs into the tail-like prolongation. This prolongation reaches the posterior end of the optic thalamus, curves downward into the inferior horn of the ventricle, and then runs forward again to the anterior extremity of the horn. It thus encircles the crus cerebri and internal capsule with a narrow band of grey matter, like a loop or surcingle. It ends below in the inferior horn of the ventricle, almost exactly opposite the point where it started in the anterior horn; and it repeats, within the cavity of the ventricle, the same folded or curvilinear arrangement that is to be seen in the gyrus fornicatus, and in the convolutions of the cortex generally. The head of the corpus striatum is not only connected with the lenticular nucleus, but also with the grey matter at the base of the brain, just in front of the Sylvian fissure. The extremity of the surcingle, on the other hand, is connected with the deposit of grey matter (the amygdala), forming the anterior wall of the inferior horn of the ventricle. The surcingle is not the same size throughout, as it diminishes in size as it approaches the end of the optic thalamus, then increases as it passes downward, again becomes slender, and, finally, enlarges at its extremity. Neither are all its parts exactly in the same plane, either vertically or horizontally, its posterior portions being situated farther from the median plane than the anterior. Though it can not be alleged that these facts throw any light on the physiological characters of the corpus striatum, they show that the corpus striatum, situated in the interior and at the base of the brain, has the same annular form which is repeated externally in the general configuration of the hemispheres.

2. *Wyeth on the Anatomical Reasons for Dextral Preference in Man.*—Dr. Wyeth says: 1. Man is right-handed by preference, as a result of his anatomical development. 2. The arrangement of the embryonic protoplasmic elements is such that the liver, developing on the right side, greatly outgrows its opposing viscus, the spleen, and pushes the heart to the left of its original position in the median line, causing an obliteration of one of the two originally symmetrical arches of the aorta, and an obliquity of the remaining one. 3. This loss of symmetry involves an arrangement of the great vessels of the neck and upper extremities, by which the artery carrying blood to the right arm is more favourably situated, and receives more blood, than the one to the left arm; while the left carotid and vertebral arteries, supplying the left half of the encephalon, which presides over motion on the right side of the body, are more favourably situated and convey more blood than the two vessels which have the same distribution on the opposite side. 4. This fact accounts for the development of the left half of the brain in excess of the right. 5. It is not the slight excess in weight of the viscera of the right side of the abdomen, which is given by some to be the cause of right-handedness, who argue from this that man must lean to the left, *i.e.*, balance himself upon the left leg, leaving the right extremities freer for action. It is a matter of cubic inches, of bulk—in fact, of *cardiac displacement*. 6. Education, training by persistent effort, will overcome the natural tendency to dextral preference, and will render the

individual more clever with the non-preferred hand, more equally adroit with both sides of his body, more symmetrical in muscular growth, will tend to equalise the two halves of the brain, giving a better cerebral development, and will consequently render him more serviceable to society and to himself.

3. *Schwalbe on the Entrance of Nerves into Muscular Tissue.*—The question regarding the point of entrance of motor nerves into their proper muscles has hitherto been very little studied; indeed, the author is not aware of any attempt having been made to arrange the various facts systematically. Kühne has pointed out that there is a regularity in the distribution of the terminal motor-plates over the length of the muscular fibre, the extremities of the muscular fibre being free from contact with the nerve over an equal extent, and the nerve-plate itself extending in both directions equidistant from the middle point. From these observations, it is evident that, in the case of a muscle whose fibres are parallel and of equal length, the innervation will be best accomplished when the nerve enters the muscle at its central point. When these muscles are very long—as, for instance, the sartorius—several branches enter independently. These form a 'nerve-line' parallel to the course of the muscle-fibres, whose terminal points are nearly equidistant from the proximal and distal points respectively of the muscle itself. If the breadth of the muscle exceed 2 or 3 centimètres, several nerve-branches enter, forming a nerve-line at right angles to the course of the fibres, and equidistant from the extremities of the muscle. In trilateral muscles, the entrance-point is situated towards the point of convergence of the fibres, this being the more marked as the convergence is the more pronounced, provided the fibres do not distribute themselves superficially at the tendinous insertion. Trilateral muscles exceeding 2 to 3 centimètres in width possess a 'nerve-line' which, generally, is advanced towards the pointed extremity in those muscles taking origin from an extensive surface of very varying distance from their point of insertion. In such muscles, notwithstanding their progressive contraction in form, there is an increase in tissue and volume in the same direction, and, consequently, the nerve-entrance must be advanced correspondingly. For example, the nerve-line of subscapularis is 98, 80, 51 millimètres from the broad surfaces of origin of the triangular mass; 42, 38, 42 millimètres from the insertion. Other triangular muscles, as the adductors of the thigh, whose broad side springs from a bony ridge, exhibit only a slight advance towards the smaller extremity (adductor brevis, nerve 57 millimètres from the proximal, 63 from the distal attachment). The relation of the 'nerve-line' to the middle point of the fibres is well shown in this group, especially in the adductor magnus, which is composed of long and short fibres, and has a 'nerve-line' running exactly equidistant between the ends of the various component fibres. Spindle-shaped muscles, pointed at both ends, as the lumbricales, semi-tendinosus, long head of biceps femoris, etc., exhibit the nerve-entrance in the middle of the muscular belly. All these rules may be brought under one common principle—namely, the nerve enters the muscle at its geometrical central point. As to the question whether the nerve enters the muscle at the external or the internal surface, Schwalbe decides in favour of the latter rule for the most of the human muscles, but the rule does not hold universally good. In conclusion, some practical considerations may be pointed out. The discovery of the exact entrance of the muscle-nerve is facilitated by simple inspection of the geometrical form; nerves of sensation, although perforating the muscle, may be distinguished, since they do not conform to the law; finally, doubts as to the innervation of a muscle by various nerves are resolved. The law of a fixed geometrical relation between nerve and muscle is fitted to give a broader basis for the belief held by Gegenbaur and his school, in the importance of the motor-nerves to the study of comparative myology.

4. *Shattock on a New Bone in Human Anatomy.*—In this interesting paper, the author describes an ossification of that portion of Meckel's cartilage which suspends the lower jaw, occurring in a rachitic subject. The process of bone, which is cylindrical in shape, is continuous with the malleus, and passes from the tympanic ring to the spinous process of the sphenoid bone. This process of bone does not abut against the lower jaw, but is connected to it by a short flattened spatulate bone, of which the distal end is articulated with the enlarged extremity of the processus gracilis, while the other end is articulated with the spine, which overhangs the anterior margin of the dental canal. Thus, on each side between the malleus and the lower jaw, is a bone, though small, yet quite distinct, of definite form, equal on the two sides, and symmetrically evolved. It is evidently the homologue of the os articulare. The interest of this anomaly lies in the portion of Meckel's cartilage which usually disappears, having become ossified, producing a quadrate bone and an os articulare. In the adult, the slender process of the malleus represents the quadrate bone of reptiles and birds. The author asks, is there any permanent representative of the original suspensorium, between this and the lower jaw? He submits that there is, in the internal lateral ligament of the lower jaw, which he regards as the portion hitherto regarded as lost in man. To this ligament, which passes from the sharp spinous inner margin of the dental foramen to the spine of the sphenoid bone, no function has been assigned, as it does not form an integral part of the articulation. A consideration of the development of the lower jaw confirms, also, the association of this ligament with the cartilage of the mandibular arch. J. G. GARSON.

5. *Frankenhäuser on the Structure of the Tracheo-Bronchial Mucous Membrane.*—Constantin Frankenhäuser (*Inaugural Dissertation*, Dorpat, 1879) gives first a historical review of all former works referring to the subject, mentioning shortly their main points. He then turns to the consideration of the principal differences which have resulted. They refer to the occurrence of lymphoid cells in the tracheo-bronchial mucous membrane, to the question whether there is an epithelioid layer under the epithelium, on the basement membrane, and to the question of the distribution, form, and minute structure of the glands in the mucous membrane of the trachea. The author then gives the results of his researches on the tracheo-bronchial mucous membrane in man, and on the dog, cat, ox, pig, sheep, badger, weasel, mole, etc. In opposition to Henle, the author finds, like all other authors, a stratified ciliated epithelium on the tracheal mucous membrane. In some small animals, however, it appears, and consists in parts of only one layer. Under the epithelium the author found the epithelioid layer described by Debove, in the ox, pig, dog, horse, and rabbit. In man and in the cat he did not find it; but as the child which he examined had died of variola, this may have been due to the changes brought about by the disease.

In the cat, he met with a network of very wide lymph spaces above the elastic longitudinal fibres of the mucous membrane. In animals, in which the epithelioid layer can be traced, the author thinks it must be identified with the basement membrane. Only in the adult human subject and in the porpoise the basement-membrane presents a quite different appearance. He, therefore, will not, without further research, include these in the opinion which he has formed. The basement-membrane in man does not get its permanent form until advanced childhood, or perhaps even later. Its increased thickness may be a normal peculiarity, but it may be also the result of certain pathological processes. At least the author noticed, in inflammatory affections of the mucous membrane, that the basement-membrane was always considerably thickened, dull, and as if swollen. This condition remains for some time after the inflammation has passed off, and it remains questionable whether it entirely disappears. Lymphoid cells were found lodged, corresponding with the account of other observers, more or less numerous in the connective tissue of the mucous membrane.

6. *Retzius on the Organ of Hearing in the Vertebrata.*—Professor G. Retzius of Stockholm has published a short article on this subject in the *Nordiskt Med. Archiv*, Band xii, Häft 2. Some years ago he found, in teleostian and plagiostomatous fishes a terminal nervous organ with a terminal branch, which had not hitherto been described, and which he then regarded as analogous to the basilar portion of the cochlea in higher animals. Subsequent researches on higher vertebrata have shown him that the terminal organ in question, with its nervous branch, is an entirely special formation, corresponding in amphibia to the *pars initialis cochleæ* of Hasse, rather strongly developed; and being always present, though indistinct, in reptiles. In birds, it is still more reduced, and it disappears altogether in mammalia, where it forms part of the terminal nervous organ of the superior ampulla. The true *pars basilaris* is not found either in fishes or in the lowest amphibia (proteus and siren), and is only first distinguished in the superior urodelans (menopoma, salamander, etc.) It is more developed in the tailless amphibia and in the chelonia, ophidia, and lower saurians; still more in the higher saurians (especially crocodilia), as well as in birds and monotremata; and in the highest mammalia it becomes the spiral apparatus of the cochlea, provided with the organ of Corti. The author describes the manner of division of the auditory nerve. In fishes (ganoidei, teleostei, elasmobranchii, and dipnoi) the nerve divides into two principal branches, of which one, the anterior or vestibular, in its turn forms three branches for the utricle and the superior and external semicircular canals, while the other, the posterior or cochlear branch, divides, in fishes, into branches which go to the sacculus, the posterior semicircular canal, the *lagena cochleæ*, and in most cases to the *macula neglecta*, or organ specially described by Retzius. The mode of division is the same in amphibia, reptiles, birds, and mammalia (including man), except that in them there is also a separate branch for the *pars basilaris cochleæ*, and the branch to the *macula neglecta* disappears in mammalia.

7. *Dean on Arterial Anomalies.*—Dr. M. H. Dean, in a letter to the *New York Medical Record*, April 3rd, says that, during the session of 1875-76, at Miami Medical College, Cincinnati, he found, in thirteen subjects examined, that in five the brachial artery was unusual in its arrangement, and in one case the popliteal was abnormal. In the first case, the right brachial artery, at the inferior border of the pectoralis major, divided into two branches, the inner branch giving off the superior profunda and anastomotica magna, and the outer branch the inferior profunda and musculo-cutaneous branches. The two branches reunited at the bicipital fascia, and formed one distinct branch for about one and a fourth inches, and then divided into the radial and ulnar arteries. Both these branches were of equal magnitude, the diameter of each branch being as great as the normal brachial artery. The relations of these branches were the same as those of the normal brachial, except that the median nerve was in relation to the inner branch by its outer side, and to the outer branch by its inner side. On the left side, the brachial artery was normal. In another case, the right radial and ulnar arteries arose from the axillary about five-eighths of an inch external to the acromial thoracic, beneath the pectoralis minor. The ulnar artery gave off the long thoracic, subscapular, posterior circumflex, superior profunda, and anastomotica magna; and the radial artery gave off the inferior profunda and musculo-cutaneous branches. These arteries did not reunite, but passed down the arm and were distributed in the forearm in the usual manner. On the left side, the radial and ulnar arteries commenced at the lower margin of the tendon of the teres major. The superior profunda and anastomotica magna were given off from the ulnar, and the inferior profunda and musculo-cutaneous branches from the radial artery. They did not reunite, but were distributed in the forearm in the usual manner. In three other cases, the radial and ulnar arteries were given off from the axillary at the lower margin of the teres major on both sides, and passed down as two distinct arteries, not reuniting; but, in the arm, the superior profunda and anastomotica magna were given off from the ulnar artery, and the inferior profunda and musculo-cutaneous arteries from the radial artery; in the forearm, the radial and ulnar were normal. In a sixth case, the popliteal artery divided each side into three branches—the posterior tibial, anterior tibial, and peroneal arteries.

8. *Mason on the Nuclei of the Nerve-Cells of the Spinal Cord.*—The author (*Journal of Nervous and Mental Disease*, July 1880) is led to the conclusion that the nuclei of the cells in the anterior cornua, in the two enlargements of the cord, have average diameters proportional to the muscular power of the corresponding extremities. In the frog, the average diameters of the nuclei of the crural enlargement exceed, by about 1-400th of a millimètre, the average diameters of the nuclei of the brachial enlargement. In the Testudo Polyphemus, whose anterior extremities attain a development more than double that of the posterior extremities, the diameter of the brachial nuclei exceed those of the crural nuclei by 1-900th of a millimètre, or, to express it differently, the size of the brachial nuclei is to the size of the crural nuclei as 7½ is to 7. In the Emys Floridana again, the crural nuclei are the larger, in accordance with the greater development of the posterior limbs. The diameters of the nuclei vary with the age of the animal, from which Dr. Mason infers that the nucleus of a motor cell grows into the muscular substance which it innervates.

9. *Izquierdo on the Mode of Termination of the Nerves of Sensation.*—At the suggestion of Professor Waldeyer, Dr. Izquierdo (*Archiv für Mik-*

roskopische Anatomie) undertook a series of investigations, with the object of determining the question whether there is really such a thing as a terminal network. As most authors who have described such a termination have founded their views on appearances observed in the cornea, this structure was chosen as a suitable object for study. The corneæ of birds were treated by Ranvier's method, which consists in placing the cornea for five minutes in fresh lemon-juice, then twenty minutes in 1 per cent. solution of gold-chloride, and then three or four days in water faintly acidulated with acetic acid. When the cornea is dark, it is hardened in alcohol, and cut. The corneæ of pigeons and canaries were found well adapted for these investigations. According to the author, the mode of termination is two-fold. Either the very fine ultimate axis-cylinder fibrillæ end free, or they end in the protoplasma of the corneal cells. A terminal network was never found, neither in the epithelium nor in the corneal stroma. In the latter, free terminations occur, although to no great extent, the usual mode of termination being, as Kühne described it, in the protoplasm of the corneal cells; but a termination in the nucleus or nucleolus was not seen. In the epithelium only free endings were found; never a network. The termination of the nerves in tactile corpuscles was studied in their simple form, as they are found in the tongue of the duck. The author agrees with Ranvier, in describing the termination as being in a tactile disk. This disk he describes as consisting of a dark outer zone and an inner clear zone; sometimes it is found as a vesicular body. The sheath of Schwann is continuous with the outer layer of the disk, the axis-cylinder with the protoplasmic inner mass. In the Pacinian bodies the termination is as a terminal bud or nodule, as has been described by Axel Key and Retzius. The terminal bodies of the clitoris of the rabbit were examined, and in these the nerve was found to end as a terminal point. G. THIN, M.D.

PHYSIOLOGY.

RECENT PAPERS.

1. ARMANGUÉ. — The Cremaster Considered as an Æsthesiometer. (*El Siglo Medico*, Oct. 31, 1880.)

2. RUBIO Y GALE, FEDERICO.—On a Case of Gastric Fistula. (*El Siglo Medico*, Oct. 1880.)

3. SACHSSENDAHL, J.—On Dissolved Hæmoglobin in the Circulating Blood. (*Dissertation*, Dorpat, 1880.)

4. RINGER, S.—The Action of Muscarin, of Nitrate of Pilocarpin, and of Jaborandi, on the Frog's Heart. (*Practitioner*, Jan. 1881.)

5. LEMOINE. — On Cerebral Localisations. (*Des Localisations Fonctionelles Encephaliques*, Paris, 1880.)

6. AMIDON.—On the Effects of the Willed Muscular Movements on the Temperature of the Head. (*American Archives of Medicine*, April 1880.)

1. *Armangué on the Cremaster considered as an Æsthesiometer.*—The researches of Dr. José Armangué, to ascertain whether the cremaster could furnish an index of sensibility, have led him to the following conclusions (*El Siglo Medico*, No. 1401, Oct. 31, 1880, p. 698).—1. The maximum contraction of the cremaster is obtained upon excitation of the skin over Scarpa's triangle, as it has been already noticed by Dr. Esquierdo. 2. The other regions, according to the intensity of the reaction, are—the remainder of the thigh, excepting its external part, the anterior region of the abdomen, the internal of the legs, the external of the thigh, and the posterior of the thorax. 3. Excitation of the upper extremities, the face, the feet, and the external region of the leg, determines very feeble contraction of the cremaster. 4. Both sides of the scrotum are drawn up upon excitation of those parts which induce a strong cremasteric contraction, but the retraction is always greater on the side corresponding to that of the part excited. The half of the scrotum corresponding to the side of the local excitation only contracts when the irritated cutaneous part acts slightly on the cremaster. 5. The contraction is not absolutely equal upon excitation of homologous points, but the difference is really so insignificant, that it may be ascribed to the difference of sensibility between the halves of the body. As a general rule, the testicle which hangs down lower always exhibits the greater contraction. 6. The contraction is proportionate to the strength of the excitation, in confirmation of Paget's law, that the degree of reflex action corresponds with that of the sensations which originate them. 7. The contraction varies with the nature of the excitation, being slight when the skin is tapped with the end of the fingers, very remarkable when the skin is scratched with the nails, and reaching its maximum when the person is tickled. Tickling, however, may easily lead us into error, as it causes laughing, which by itself elicits energetic contractions of the scrotum. 8. The contraction of the cremaster has never failed to be produced upon excitation of the proper points in sound individuals. The same may be stated in reference to the irritation of normally sensible regions of the skin in individuals with anæsthesia. 9. Some persons exhibit in their normal condition little cremasteric contraction; they always submitted, however, to the above laws, though less intensely. This individual change in the intensity of the cremasteric contraction prevents its serving as a guide to estimate the loss of sensibility symmetrically affecting both sides of the body; since, unless acquainted with the normal antecedents of the case, we cannot judge whether the diminished contraction results from loss of sensibility, or from congenital absence of reflex excitability. 10. This method may be applied to recognise the absolute loss of sensibility; for then, as it follows from the preceding remarks, there will be no contraction whatever of the cremaster, which, on the contrary, will always be more or less manifest whenever sensibility is not impaired. 11. This method may be again applied to surgical anæsthesia, and may be perhaps substituted, in regard of simplicity and reliability, for the other æsthesiometers (Schiff has given this name to the pupil, and Ludwig to the arterial tension). 12. This means is superior to the usual æsthesiometers, the model of which is Weber's compasses, because it does not require for its application conditions which are not constantly met with in every patient. The great advantage of the organic æsthesiometer is that it does not require any active co-operation of the patient; for, when once we interrogate the body, the response comes of itself, not subject to the will, intelligence, and other psychical and emotional conditions of the patient. 13. This method, finally, answers to special indications, and is not free from important inconveniences. Some of

them may be, however, avoided by practice and careful application; but the method will always present two inevitable defects, namely, that it cannot be applied to the extreme parts of the body, nor to females. M. G. ECHEVERRIA, M.D.

2. *Rubio y Gale on Gastric Fistula.*—Dr. Rubio y Gale records a case of gastric fistula (*El Siglo Medico*, October 1880) following necrosis of the second false rib, in which he was able to carry out certain physiological researches. As the result of these he found that, of all substances experimented with, albumen was that which passed most quickly from the stomach to the duodenum, while cod-liver oil passed the most slowly. The conduct of milk in the stomach differed essentially from the conduct of the same fluid with certain reagents in the atmosphere. In the stomach it did not curdle, but became a plastic viscid mass, which followed the movements of the patient from side to side in a sluggish and imperfect manner. The secretion of the gastric juice was not constant, but took place at intervals; the contents of the stomach were also passed at intervals through the pylorus, which, in a state of rest, remained constantly closed. L. FORBES, M.D.

3. *Sachssendahl on Dissolved Hæmoglobin in the Circulating Blood.*—The results of the second and third section of the author's dissertation, Dorpat, 1880, (the first is a historical introduction) are summarised by him thus.—1. The transition from the frozen to the fluid state increases the decomposition of most of the blood-corpuscles, and favours the development of fibrin-ferments. 2. It accelerates the fermentation-process in itself. 3. The transition exercises no influence on the free fibrin-ferment. 4. A great portion of the active ferment is either destroyed or made ineffective by the process of coagulation. 5. The transition from the frozen to the fluid state at the same time makes the serum less effective. 6. Hæmoglobin also increases the action of the fibrin-ferment. 7. The dissolved hæmoglobin acts in this respect more effectively than that inclosed in intact blood-corpuscles; and that which has been frozen and thawed, or dissolved in ether, acts more effectively than that simply dissolved in water. 8. Hæmoglobin gradually loses this character by exposure to the air. 9. The fibrin-ferment becomes gradually ineffective when left in contact with hæmoglobin. 10. Hæmoglobin, simply dissolved in water, produces thrombosis; but not in so high a degree as that which has been repeatedly frozen and thawed. 11. This property of hæmoglobin disappears gradually outside the organism. 12. The same thing applies to the hæmoglobin inclosed by the intact blood-corpuscles. 13. The effect in producing thrombosis of fresh intact blood-corpuscles of the horse, is—if present at all—very small. 14. Horse-hæmoglobin once crystallised is quite ineffective. Sachssendahl could not confirm the observation made by Birk, that the fermentation contents of circulating and of dead blood stand in reversed proportion to one another. The fermenting contents of the blood of the same animal, examined at intervals of a few hours, showed no important variation. Concerning the character of the action of hæmoglobin, the author arrived, through his experiments, at the conclusion that it increases enormously the quantity of the fibrin-ferment in the circulating blood, and thus produces coagulation. Like ferment-solution, the injection of small doses of hæmoglobin—which do not act at once fatally—causes a temporary rise in the temperature, which is sometimes considerable; it causes, at the same time, an increase, greater or smaller, of the ferment-contents in the circulating blood, and a diminution in the defibrined blood. The diminution in the quantity of the fibrin secreted from the blood goes hand in hand with these changes. The methods employed were the same as those of Birk and Edelberg.

4. *Ringer on the Action of Muscarin, of Nitrate of Pilocarpin, and of Jaborandi, on the Ventricles of the Frog's Heart, and on the Antagonising Action of Atropia.*—In the *Practitioner*, January 1881, p. 5, Dr. Sydney Ringer reports the results of a series of experiments upon the above named drugs, which shows 'that jaborandi and pilocarpin affect the ventricles separated from the auricles; and as the ventricles contain no inhibitory ganglia, these substances cannot affect the ventricle by inhibition, but must weaken or paralyse it by their effect on the excito-motory ganglia, or muscular tissue, or both. As atropia antagonises the action of jaborandi on the ventricle, it cannot act by paralysing the inhibitory apparatus, but from its effects on the excito-motory ganglia and muscular substance, and this may be due to chemical displacement. Thus: pilocarpin and muscarin paralyse the heart by combining with the molecules of the excito-motory nervous apparatus, and of the muscular tissue of the heart. Atropia antagonises pilocarpin and muscarin, because it has a stronger affinity on the muscular and nervous structures of the heart than these substances, and displaces them, replacing their effects by its own.' RICHARD NEALE, M.D.

5. *Lemoine on Cerebral Localisation.*—The first part of this paper (*Des Localisations Fonctionnelles Encéphaliques*, Paris, 1880) contains an account of seven experiments on dogs. The method employed was the artificial production of hæmorrhagic foci. Blood from the artery of a living animal was conducted through a cannula into the part of the brain whose function was to be tested. We notice little that is new in the observations that were made: the most interesting fact elicited is, that the centre for the conjugate movements of the eyes is in the postero-superior part of the region called the *calotte* (tegmentum). The injection of osmic acid into the brain proved a failure, on account of the impossibility of localising its action. In the latter part of the paper, the author discusses the excitability of the cortical grey matter. His experiments show that electrical stimulation of the cortex produces the same effects in new-born cats and dogs (in which the nerve-cells of the cortex are still embryonic) as in adult animals. From this he argues that it is not the nerve-cells of the psycho-motor centres that are stimulated, but merely the conducting fibres that issue from them, and pass to lower ganglia. The nerve-elements of the cortex, in both sensory and motor regions, are inexcitable.

6. *Amidon on the Effects of Willed Muscular Movements on the Temperature of the Head.*—It occurred to the author (reprint from *American Archives of Medicine*, April 1880) that excessive use of a group of muscles might generate in the cortical centre for those muscles an amount of heat that would be perceptible in the overlying scalp. A preliminary experiment showed that such was really the case. Dr. Amidon now undertook a series of experiments, with the object of adding to our knowledge of cerebral localisations. His mode of procedure was as follows. A quadrilateral piece of sheet India-rubber, of sufficient elasticity to fit the convexity of the head, was fixed in position by straps and buckles. Numerous holes were made in it, and Seguin's surface-

thermometers applied to various parts of the head. The temperatures were noted after ten minutes of quiet, and then the patient was directed to make some vigorous willed movement, *e.g.*, contraction of the biceps, for five or ten minutes. Five minutes after the movements had ceased, the temperatures were again noted. If a marked rise had taken place in any area, a second experiment was made, the thermometers being now concentrated in this area. In each experiment the temperatures of the different spots were carefully marked on outline maps of the head, from a comparison of which a diagram was constructed, showing the areas in which elevations of temperature constantly occurred after willed activity of certain muscles or groups of muscles. (The temperature of the areas often rose 0.75 deg. and 1 deg. Fahr., and sometimes as much as 2 deg. Fahr.) It now only remained to transfer these areas of scalp to the cerebral surface, which was not a very difficult task, with our present knowledge of cerebral topography. By this method, Dr. Amidon was successful in mapping out no fewer than twenty-five different areas. The area for the trapezius, levator anguli scapulæ, and rhomboids, is in the anterior part of the superior frontal convolution. Further back, on the same convolution, is the deltoid area, behind which is the area for the biceps, while, behind it, and slightly overlapping the fissure of Rolando, is that for the triceps. The area for the scaleni group (muscles bending the neck forwards) is in the second frontal convolution, in front of its middle. Behind it we have in succession the areas for the deep extensors of the neck, for the pectoralis major, for the latissimus dorsi, and for the flexors of the hand and fingers. This last area occupies a portion of the base of the second frontal convolution, and the adjoining part of the ascending frontal. Below it, on the ascending frontal, lies the area for the elevators of the angle of the mouth; lower still, that for the orbicularis oris; and still lower, that for the sterno-mastoid. The tongue and hyoid group is represented by a small area at the base of the third frontal convolution. At the base of the ascending parietal convolution lies the area for the platysma, above which is the area for the retractors of the angle of the mouth, and above this the area for the orbicularis palpebrarum. Above this last, and encroaching a little on the ascending frontal convolution, is the area for the extensors of the hand and fingers. The anterior part of the postero-parietal lobule contains the anterior tibial area, behind which lies the area for the calf. Still further back, and falling chiefly on the first and second occipital gyri, is found the area for the quadriceps femoris; while, on the third occipital gyrus, and the posterior part of the middle and inferior temporal convolutions, is the area for the abdominal muscles. On the posterior parts of the angular gyrus, and middle temporal convolution, is the area for the psoas and iliacus. The area for the erector spinæ occupies the posterior parts of the upper and middle temporal gyri. Above this, and covering portions of the angular, supramarginal, and superior temporal gyri, is the area for the hamstring muscles. On the upper part of the supramarginal gyrus is the area for the muscles of the eye. The only parts that Dr. Amidon could not correlate with muscles, were the anterior half of the temporal lobe, and the anterior extremity of the frontal lobe. W. J. DODDS, M.D., D.Sc.

OTOLOGY.

RECENT PAPERS.

1. MEYER, W.—On the Treatment of Othæmatoma. (*Archiv für Ohrenheilk.*, vol. xvi.)
2. LŒWENBERG.—Parasitic Fungi in the Human Ear, etc. (Read at the Congress at Rheims of the *Association Française*, 1880.)
3. HEMMING, W. D.—Forms, Causes, and Treatment of Tinnitus Aurium. (Reprint from *Brit. Med. Jour.*, Sept. 25, 1880.)
4. KNAPP, H.—Perichondritis Auriculæ. (*Archives of Otology*, Sept. 1880.)
5. MICHAEL, J.—Otitis Media Purulenta, with Necrosis of the Inner Wall of the Tympanum and of the Mastoid Process. (*Ibid.*)
6. FRÄNKEL, E.—Contributions to the Pathology and Pathological Anatomy of the Organ of Hearing. (*Ibid.*)
7. MICHAEL, J.—Chronic Purulent Inflammation of the Middle Ear and Abscess of the Brain, existing independently of each other. (*Ibid.*)
8. GUYE, A.—On Menière's Disease. (*Ibid.*)
9. GOTTSTEIN, J.—On Menière's Complex of Symptoms. (*Ibid.*)
10. HOTZ, F. C.—Aural Complaints in consequence of Malaria. (*Ibid.*)
11. HOTZ, F. C.—Primary Postaural Abscess, without Implication of the Middle Ear. (*Ibid.*)
12. BOUCHERON.—On Deaf-Mutism from Compression of the Acoustic Nerve or Otopiesis. (*Journ. de Laryngologie et d'Otologie.*)
13. BRISSON.—Treatment of Otorrhœa without Affection of the Bone. (*Thèse Inaugurale*, Paris, 1880.)

1. *Meyer on the Treatment of Othœmatoma.*—Dr. Meyer, of Copenhagen (*Archiv für Ohrenheilk.* vol. xvi), recommends treatment of this affection by the systematic employment of *massage*, or kneading, and describes three cases in which it was used. In the first two instances (which occurred in the two ears of the same individual) the result was perfectly satisfactory, absorption taking place in a few weeks, without leaving any disfigurement. In the third case, absorption was almost complete when the patient disappeared from observation. These cases are also interesting, as having occurred in perfectly sane persons. The author, however, notes that the father of the first, and the mother of the second patient, had suffered from incurable insanity. In the second patient, a traumatic cause was present, inasmuch as her ear had been repeatedly pinched by her drunken husband. In these cases, massage was applied, from one to four times daily, for a quarter of an hour (the skin of the auricle having been previously anointed with a glycerine ointment), and a pad of charpie kept pressed on the auricle by means of a bandage applied tightly round the head.

2. *Lœwenberg on Parasitic Fungi.*—Dr. Lœwenberg, in a paper read at the Congress at Rheims of the *Association Française*, in 1880, considers as causes of otomycosis the introduction of oils into the ear, and also the instillation of medicated solutions which have undergone alteration, resulting in a formation in them of fungi. To avoid this, the author employs either pure alcohol or alcoholic solutions, or else boils all aqueous solutions before use. Not only in the ear does he consider that solutions containing fungi may be productive of mischief, but also in hypodermic injections, and especially in the case of eye-drops. Examination of a specimen of solution of atropin, and of solution of

pilocarpin, obtained from an oculist, showed that they both contained mycelium. In case the substances cannot be boiled in an aqueous solution, he recommends either that the active substance should be kept in an alcoholic solution, to which water previously boiled can be added before use, or else that they should be kept in a saturated solution, to be diluted, as in the preceding case.

3. *Hemming on Tinnitus Aurium.*—This paper (*Brit. Med. Jour.*, Sept. 25, 1880) contains a concise but clear account of the forms, causes, and treatment of this common aural symptom. The division adopted by the author is that of Woakes.

4. *Knapp on Perichondritis Auriculæ.*—Dr. Knapp (*Archives of Otology*, Sept., 1880) cites three cases of this disease from his own experience. In Case 1, which is related at length, the meatus was at first swollen, and its calibre almost obliterated, and there was a fluctuating swelling at its anterior lower part, which on evacuation yielded watery pus. The swelling gradually crept over the whole anterior (?) surface of the auricle excepting the lobule, and was opened several times, thin viscid pus being always evacuated, and *never any blood.* At the beginning of the sixth week the swelling reached its height, the helix being swollen, and its fossa only preserved at its upper part. The remainder of the auricle presented an uneven, nodular, reddish swelling, ceasing abruptly at the upper end of the normal lobule. From this time the swelling began to subside, and by the tenth week the inflammatory process had disappeared. The auricle was shrunk, irregularly corrugated, pressed against the skull, and measured scarcely two-thirds of its natural size. When first seen, the membrana tympani was normal; but a few days after the termination of the perichondritis a small perforation was found in the lower part of the membrane. This healed in the course of a few weeks. In the diagnosis of perichondritis, the author lays great stress on the integrity of the lobule in this affection.

5. *Michael on Necrosis of the Temporal Bone.*—Dr. Michael (*Ibid.*) describes a case of necrosis of the inner wall of the tympanum, and of the mastoid process, in which six pieces of bone were easily removed during life by syringing and with forceps, one piece being remarkable from the presence in it of the tympanic portion of the facial canal.

6. *Fränkel and Michael on the Pathological Anatomy of the Ear.*—Dr. Fränkel (*Ibid.*, Sept, 1880) describes the symptoms during life, as well as the *post mortem* appearances, in three cases of otitis media purulenta chronica, complicated with cerebral abscess. In the first case, the fact that the beginning of the exacerbation of the 'chronic affection was in connection with a syringing of the ear', imposes upon us, he thinks, the duty of seeing that sufficient care is bestowed upon this apparently unimportant procedure. In the third case, facial paralysis observed during life was found to be due, in the absence of a bony wall separating the facial nerve from the drum-cavity, to direct compression of this nerve by inspissated exudation in the tympanum. This renders intelligible the fact that paralysis occurring in the train of purulent otitis media may be recovered from as soon as the cause maintaining it ceases. The author next details a case of epithelioma of the drum-cavity, with destruction of the greater portion of the temporal bone and purulent basilar meningitis. The last case described in this paper is one of a pebble introduced into the ear, which repeated attempts at extraction had unfortunately only driven through the previously uninjured membrana tympani into the tympanic cavity, where it was found after death. Extensive injury to the tympanic mucous membrane, with consecutive purulent inflammation in the middle ear and adjoining mastoid cells, and a dislocation and partial crushing of the ossicles and wall of the labyrinth, and purulent meningitis of the convexity were also found. The same number of the *Archives* contains a paper by Dr. Michael, of Hamburg, recording a case of chronic purulent inflammation of the middle ear and abscess of the brain, existing, as he considers, independently of each other.

8. *Guye on Menière's Disease.*—In a very interesting paper on this subject (*Ibid.*, Sept., 1880) Dr. Guye, of Amsterdam, arrives at eleven different conclusions, some of the most important of which may be shortly stated. He is of opinion that most, if not all, of the cases of Menière's disease are of a secondary character, *i.e.*, due to inflammatory processes in the tympanum or the mastoid cells. The sensations of rotation are most frequently about a vertical axis, and the author has observed that they always correspond at first to a rotation in the direction of the ear affected, producing sometimes by reflex action a rotation of the head in the opposite direction. The author argues from this fact, in opposition to Mach, that the sensation of rotation in the left horizontal semicircular canal is a rotation to the left, and in the right horizontal semicircular canal to the right. Conditions simulating chorea in children, and clonic contraction of the muscles of the face and upper extremities in adults, may, according to the author, develop themselves in the course of the disease, and disappear wholly after local treatment of the affection of the ear. Menière's disease can be relieved with or without loss of hearing. Local treatment is most successful in cases that are not too old, and often, indeed, in the most hopeless cases. Amongst internal remedies, the author places most reliance on quinine. It often, he finds, acts paradoxically by wholly removing the previous tinnitus, while temporarily increasing the deafness during its administration. In regard to etiology, the author lays much stress on cold and on catarrh of the middle ear. Several cases of interest are described in the paper.

9. *Gottstein on Menière's Complex of Symptoms.*—Dr. Gottstein (*Ibid.*, Sept. 1880), in considering the same subject as the previous author, proceeds on different lines. In regard to the physiological significance of the semicircular canals, only two things are, he thinks, proven beyond a doubt, viz., that affections in the sound-conducting apparatus can, under certain circumstances, produce transitory disturbances of the equilibrium without justifying us in assuming organic changes in the labyrinth; and secondly, that in affections of the middle ear attacks of vertigo may associate themselves with deafness in a few rare cases, when the morbid process has invaded the labyrinth. The author considers it still uncertain whether the semicircular canals are only organs of equilibrium, or whether they only accidentally influence the central nervous organ. The paper is devoted to a discussion of the form of Menière's disease, in which all affections of the sound-conducting apparatus can be excluded, or, as the author terms it, 'neuropathic auditory vertigo'. Of this he distinguishes two forms: 1. Those cases in which the patients—usually children—suffer from meningeal symptoms, recover completely, but remain deaf,

and walk staggeringly; 2. Those in which deafness and vertigo appear instantaneously, without any change in the general health. Of the first class, the author mentions nineteen cases, which came under his care between December 1878 and August 1879. In six of these, meningitis could probably be regarded as the starting-point of the deafness, in the remaining thirteen there were feverishness and violent headache, sometimes accompanied by other symptoms. The ages of the patients varied from two to sixteen years; and taking into consideration the fact that since last autumn an epidemic of cerebro-spinal meningitis had raged in Breslau and Silesia, from which neighbourhood most of the patients came, the author has no hesitation in connecting these cases of auditory vertigo with this epidemic. Hence the author expresses great doubts in regard to the occurrence of a genuine otitis labyrinthica. Of the second form of vertigo (so-called 'apoplectiform'), the author has only seen three cases during the last thirteen years, one occurring in connection with tabes, and two associated with leukæmia.

10. *Hotz on Aural Complaints in consequence of Malaria.*—Dr. Hotz of Chicago (*Ibid.*, Sept. 1880), after remarking that malaria is very common in his part of the country, relates three cases, in which, after the failure of the usual local remedies, the patients recovered rapidly under the internal administration of quinine. Case 1. A lady, aged 35, suffered from acute purulent otitis on the right side, the result of drawing cold water into the nose. Both sections of Shrapnell's membrane were bulged into large pouches, which collapsed completely on puncture. The membrana tympani was not hyperæmic. Discharge subsequently took place through a slit in the anterior-inferior section of the membrane. There was violent pain, and the meatus was exceedingly tender. In spite of local treatment for four days, the pain continued unabated, being always worse at night. Four grains of quinine were then ordered every two hours, and an opiate at night, if necessary. The pain ceased, and the perforation rapidly healed. Under the daily use of the air-douche, and the continued employment of quinine (8 grs. daily), the hearing became normal. Case 2 was one of acute catarrhal otitis, with small perforation of the tympanic membrane. Local remedies having failed to give relief after two weeks, the patient was put upon one grain each of quinine and Dover's powder every hour, and two leeches were ordered behind the ear. After twenty-four hours, the pain had ceased, and in two weeks the membrane was healed. Case 3 was that of a merchant suffering from muco-purulent otitis, with great and persistent swelling of the deeper portions of the meatus, and violent pain in the head. The patient was the subject of tertiary syphilis, which the author regarded as a grave complication. Treatment by 10 grains of iodide of potassium thrice daily for four weeks accomplished nothing; and applications of sulphate of copper, and of a ten-grain solution of nitrate of silver, to the granulations around the perforation, only brought on paroxysms of the pain. It appeared that before these applications the pain came on on alternate days, increasing in violence till the afternoon, when a profuse perspiration would bring relief. The patient was resident in a locality where malaria was endemic. The author then recognised the case as one of otitis intermittens (Weber-Liel). All local treatment was, therefore, suspended, and two grains of quinine ordered every hour, under which the pain ceased, and the perforation soon healed. In the diagnosis of these malarial cases, the author lays stress on the disproportion between the morbid changes in the ear and the degree and extent of the nervous symptoms; also on the intolerance of the ear for local remedies. He prefers small and frequent doses of quinine to the large doses usually given, and considers that the remedy must be continued for some time after the apparent recovery of the patient, in order to ensure a permanent cure.

11. *Hotz on Primary Postaural Abscess.* — Dr. Hotz (*Ibid.*, Sept. 1880) relates the following case of primary periostitis of the mastoid process. A carpenter, aged 45, had suffered for six months from alternate swelling behind the left ear, and purulent discharge of the meatus. When first seen, he was a complete wreck, both physically and mentally. There was considerable swelling of the postaural region, but no tenderness. The swelling—very slight over the mastoid region—was very marked and fluctuating in the subauricular fossa; the upper end of the sterno-mastoid was also swollen. There was muco-purulent discharge in the left meatus; and on its posterior wall, at the junction of the cartilaginous and bony portions, was a small, semi-globular elevation, with an opening at its apex. On pressing the integument in the subauricular fossa, this elevation discharged a quantity of muco-pus into the meatus. The left membrana tympani was imperforate, gray, indrawn, and without light spots. The right membrane was also opaque and indrawn. The hearing distance for a watch was—left ear, $\frac{1}{24}$; right, $\frac{0}{24}$. On incising the swelling, a cavity lined with granulations, and containing a small amount of muco-pus, was opened in the subauricular region. A probe inserted into this could be made to touch another inserted into the aperture in the meatus. A drainage-tube was employed; but, as the soft ones were apt to slip out during the night, a silver one had to be inserted. About a month after the incision, two large shreds of fibrous tissue (periosteum), with small spicula of bone adherent to them, came away, and shortly afterwards the wound was cicatrised and the meatus normal, the patient having regained his health. The author points out the fact that, in the hitherto recorded cases of this affection, which were not early interfered with by operation, the abscess established a communication with the external auditory canal, at the junction of the osseous and cartilaginous portions. He is of opinion that these abscesses may arise either from phlegmonous inflammation or from periostitis.

12. *Boucheron on Deaf-Mutism from Compression of the Acoustic Nerve or Otopiesis.*—The author (*Jour. de Laryngologie et d'Otologie*) reports two cases of deaf-mutes, who, under treatment, recovered sufficient hearing power to enable them to learn to speak. Case 1. In a female deaf-mute, aged 2½ years, the author diagnosed repeated nasopharyngeal catarrh, which had spread into the tympanum, obliteration of the Eustachian tube by swelling of its mucous membrane, and consequently pressure on the acoustic nerve, which the author terms 'otopiesis'. The tympanic membranes were indrawn, and during acute attacks of naso-pharyngeal catarrh intensely congested. The lesser processes were prominent. The hearing commenced to return after one month's treatment, and gradually improved, until at the end of one year the child could hear a loud voice and the watch on contact. She could articulate words clearly, which she had learnt without watching the lips. Case 2. A female deaf-mute, aged 4½ years,

presented similar symptoms. In both these cases the patients were very intelligent, and there was no consanguinity or deafness of the parents, nor any history of convulsions. Under treatment, hearing began to return in about a month, and after the lapse of 5½ months the patient had learnt forty words, which she pronounced, however, whilst watching the lips. Further improvement was still taking place. The author compares deafness produced by pressure on the acoustic nerve to blindness due to compression of the optic nerve in glaucoma. The most favourable time for treatment, he considers, is when the child's deafness is first perceived, *i.e.*, at the age of one or two years. The indications for treatment in cases of deaf-mutism due to otopiesis are, according to the author, as follows:—1. To relieve pressure on the acoustic nerve by inflation of the tympanum; 2. To reduce the inflammatory swelling of the Eustachian mucous membrane by pharyngeal cauterisations; 3. To moderate or remove by suitable means the recurrent attacks of catarrh. In intractable children, the inflations by the catheter have to be done under chloroform. They were employed for a year in the first case. The latter child submitted to catheterisation after being chloroformed a few times.

E. Cresswell Baber, M.B.

13. *Brisson on the Treatment of Otorrhœa without Affection of the Bone.*—Dr. Brisson (*Thèse Inaugurale*, Paris, 1880) recommends for the treatment of this affection the instillation luke-warm, five times daily, of several drops of the following solution, viz. Distilled water, 100 grammes; hydrate of chloral, 3 grammes; sulphate of alumina, 5 grammes. Dr. Jacquemart has also found this solution good.

DERMATOLOGY.

RECENT PAPERS.

1. Dick.—On the Treatment of Guinea-Worm. (*Brit. Med. Jour.*, Aug. 1880, p. 207.)
2. Morris.—On Scarification as a New Remedy in Skin-Disease. (*Ibid.*)
3. Morris, Malcolm.—On Diagnosis and Treatment of Ringworm. (*Lancet*, Jan. 1881, pp. 164, 241.)
4. Richardson, B. W.—On the Use of Ethylate of Sodium in Ringworm. (*Lancet*, Feb. 1881, p. 244.)
5. Liveing, Robert.—On the Treatment of Ringworm by Croton-Oil. (*Brit. Med. Jour.*, Feb. 1881, p. 227.)
6. Brochin.—On Eczema due to Administration of Chloral. (*La France Méd.*, No. 10, 1880.)
7. Duguet.—On Blue Spots on the Skin Symptomatic of Phtheiriasis Pubis. (*Phil. Med. Times.*)
8. Eichhoff.—On Multiple Cutaneous Gangrene, due to cachexia. (*Deut. Med. Woch.*, Aug. 21, 1880.)
9. Labat.—On Congenital Syphilitic Pemphigus. (*Prog. Méd.*, No. 43, 1880.)

1. *Dick on the Treatment of Guinea-Worm.*—Dr. Forbes Dick contributes an able paper on this subject to the *British Medical Journal*, August 1880, p. 207. Of the four lines of treatment, viz., coaxing, pulling, sucking, or stinking out the worm, Dr. Dick gives the preference to skilled pulling out; this, with the aid of bringole poultices, being, in his experience, the most satisfactory. It is found that the guinea-worm dies out in those localities where the tanks or ponds, equally used for drinking and washing, completely dry up during the year, and would seem to be endemic only where these do not do so. The way to stamp out the disease is thus obvious.

2. *Morris on Scarification as a New Remedy in Skin-Disease.*—In the *British Medical Journal*, August 1880, p. 202, Mr. Malcolm Morris brings forward three cases of port-wine marks, in which this treatment was not followed with success similar to that which attended it in Mr. Balmanno Squire's hands. Three cases of extreme acne rosacea of the nose are recorded, in which the treatment proved eminently successful.

3. *Morris on Diagnosis and Treatment of Ringworm.*—In a clinical lecture on ringworm by Mr. Malcolm Morris, reported in the *Lancet*, Jan. 1881, pp. 164, 241, the value attached by Mr. Alder Smith to the treatment of ringworm, by the aid of strong irritants, exciting artificial kerion, is adversely criticised. Mr. Morris thinks all inflammation should be avoided, and believes that many old-standing cases of ringworm are the result of over-treatment, that is to say, a chronic eczema, produced by the remedies, and kept up for months and years, while the fungus all the time exists undisturbed. Hitherto carbolic acid has been the parasiticide *par excellence*, but Mr. Morris believes it to be too irritating, and he has lately substituted thymol and menthol, with great advantage. The following formula has proved most efficacious: Thymol or menthol, half a drachm; chloroform, two drachms; olive-oil, six drachms. In very young children, less chloroform may be used, the object of this ingredient is to carry the parasiticide to the very bottom of the hair-follicle, and the use of the oil is to arrest the evaporation of the chloroform. As regards epilation, Mr. Morris uses it only in early acute patches, where there are a limited number of hairs affected, which are readily removed; but if the disease be old-standing, and the hair very numerous and readily breaking off, Mr. Morris thinks it more than useless to epilate.

4. *Richardson on the use of Ethylate of Sodium in Ringworm.*—Dr. B. W. Richardson, in the *Lancet*, Feb. 1881, p. 244, speaks highly of the value of the ethylate of sodium in obstinate cases of ringworm, a rapid cure being effected after other treatment, perseveringly applied, had failed.

5. *Liveing on Treatment of Ringworm by Croton-Oil.*—Dr. Robert Liveing, in the *Brit. Med. Jour.*, Feb. 1881, p. 227, strongly advocates the treatment of ringworm by croton-oil in its pure state, believing, as he does, that in this remedy we have a sure and speedy means of curing this troublesome disease. It is not to be used in children under ten years of age. It is never to be applied, at any one time, over a larger surface than a florin. It is only to be used in chronic cases that have resisted other treatment. It is to be used only with the consent of the patient's friends; the nature of the treatment, and the effect of the oil upon the skin, being first fully explained.

Richard Neale, M.D.

6. *Brochin on Eczema due to Administration of Chloral.*—At a meeting of the Société de Médecine Pratique (*La France Médicale*, No. 10, 1880), M. Brochin, in speaking of the inconveniences of chloral, related the case of a young, strumous girl, subject to eczema of the lips, who, on two separate occasions, found this affection to reappear immediately on taking a draught and an injection of chloral, and that with such intensity that the mouth and the tongue become involved. The diagnosis of buccal eczema was confirmed by M. Bazin. In the discussion which followed his remarks, others stated that they had frequently observed an erysipelatous-looking eruption on the face, of a painless character, following the administration of chloral in large

doses, and disappearing when the remedy was discontinued.

7. *Duguet on Blue Spots on the Skin Symptomatic of Phtheiriasis Pubis.*—The occasional occurrence of blue, slate-coloured, or dark spots on the skin, of a mysterious character, has, says the *Phil. Med. Times*, long been exercising the minds of the French, who have written long articles to show the exact significance of these mysterious patches and the mode of their production. From an investigation of 250 cases in 1878, Moursou found that they were invariably accompanied by crab-lice. Recently, Dr. Duguet (*La France Méd.*, 1880, p. 610) has produced these blue spots by inoculating various portions of the skin with a paste made of the pediculi ground up with water. The day after inoculation very well-marked blue patches, of the size of a tencent piece, were notieed at each point operated upon. These patches lasted several days, then began to fade, and by the end of ten days had entirely disappeared.

8. *Eichhoff on Multiple Cutaneous Gangrene.*—In 1878, Professor Simon first called attention to this comparatively rare disease, which for the most part affects children of various ages, and has a malignant character. Dr. Eichhoff (*Deutsch. Med. Woch.*, Aug. 21, 1880) recently observed a case of this kind at the Breslau clinic for cutaneous and syphilitic diseases. The child, aged 3, was first seen in April, and was then suffering from extensive eczema of the face, breast, and back. Constitutional symptoms were not marked at this time, and the eczema rapidly yielded to appropriate treatment. In May the child was again brought to the clinic, when its general health was found to be much depreciated. The back had been covered with dark-red patches, the largest about the size of a millet-seed. Vesicles soon appeared above these patches, but they rapidly collapsed, leaving ulcers, which soon became gangrenous. The sloughing extended deeply down into the subcutaneous connective tissue. Local and constitutional treatment caused these sloughing ulcers to heal, with cicatrices resembling those of variola. Some time after this a corneal ulcer developed, and simultaneously with its appearance the head became affected with gangrenous ulcers. The latter slowly healed, leaving deep cicatrices. A second exacerbation occurred in June, and again a corneal ulcer was one of the complications. The ointment, applied locally, consisted of 15 parts each of camphor and myrrh, with 100 parts of vaseline. The pathogenesis of this affection was said to resemble that of ordinary bedsores. The appearance of the corneal ulcers was explained by the depreciation of the child's general health and insufficient *vis à tergo*.

9. *Labat on Congenital Syphilitic Pemphigus.*—Labat's case of congenital syphilitic pemphigus (*Progrès Médical*, No. 43, 1880) presented the peculiarity that the eruption was very generalised, and was absent only in the situations where its presence is regarded as characteristic, the palms of the hands and the soles of the feet. R. SAUNDBY, M.D.

REVIEWS.

Leçons sur les Localisations dans les Maladies du Cerveau et de la Moëlle Epinière. Par J. M. CHARCOT. Paris. 1880.

THIS work is a reprint of a series of lectures delivered by Professor Charcot before the *Faculté de Médecine* of Paris. All the investigations of this celebrated physician have been hitherto received in England with the respect which a devoted study of nervous affections must necessarily command. The present contribution fully sustains the high reputation of the Salpêtrière school of neurology for painstaking and laborious investigation. In the first part of this book, which was published two years ago, M. Charcot dealt more especially with cerebral localisation from a clinical and pathological standpoint. The second volume of this work treats of localisation in spinal diseases. Attention is called to the number of affections, evidently of spinal origin, in which hitherto no pathological change had been demonstrated. But when we consider the progress of pathological anatomy, as evidenced in the investigation of locomotor ataxy and disseminated sclerosis, we may be allowed to hope that the old group of neuroses will shortly disappear before the light of modern research. In the first chapter, it is pointed out that the spinal cord is a complex organ made up of different parts, which may be affected *systematically* and independently one of another. The development of the component parts of the neuro-axis is fully described in the second lecture, and it is shown that whilst, at birth, the brain is a rudimentary organ, the spinal cord and medulla oblongata have already reached an advanced stage. A detailed account of the development of the pyramidal strands is given. M. Charcot traces the continuity of the psychomotor centres with the anterior two-thirds of the internal capsule, and shows that the latter passes through the inferior layer of the peduncle into the pons and medulla, where a partial decussation of the pyramids is effected. In the spinal cord, the continuation of the anterior bulbar pyramids is found in the anterior columns as direct fibres, and in the posterior part of the antero-lateral columns as indirect or decussated fibres. Variations in the decussation of the pyramids are numerous, but they may be resolved into three main types. It rarely happens that practically no decussation takes place; and hence we may explain the occasional occurrence of paralysis on the same side as the cerebral lesion. Since the tract of fibres passing from the psychomotor centres to the cord are undeveloped at birth, the brain remains functionally inactive up to a certain age. It is easy, then, to understand the observation of M. Parrot, that even vast lesions of the cerebrum may not betray their existence in very young children, whose life is purely automatic. When a destructive lesion affects the motor tract in the cerebrum, crura, pons, medulla, or spinal cord, the result is always the same—descending degeneration of the pyramidal strands. In spinal affections of a destructive nature, the lesions are both ascending and descending. In the former case, sclerosis attacks the direct cerebellar fibres in the antero-lateral columns, which extend from the upper dorsal region to the cerebellum. Immediately above the lesion, the posterior columns in their whole extent are similarly affected, but the sclerotic change becomes less and less evident as it ascends, until, about the level of the cervical enlargement, it is confined to the columns of Goll. The degeneration, however, may be followed up to the level of the fourth ventricle. When that part of the posterior column which lies between the fibres of Goll and the posterior cornua becomes sclerotic, we have the essential pathological change of locomotor ataxy.

M. Charcot justifiably lays great stress on the occurrence of ankle-clonus or provoked spinal epi-

lepsy, as an indication of secondary sclerosis after hemiplegia and spinal lesions affecting the motor tract. He points out that these phenomena often precede contracture by several weeks. In a case of hemiplegia, spinal trepidation could be induced a week after the attack, and in another, rigidity of the leg was observed in a fortnight. The tendon-reflexes, and their significance, receive due consideration. M. Charcot brings forward arguments in favour of the reflex nature of these 'tendo-muscular contractions', as Dr. Gowers has proposed to call them. The rigidity of the extremities in hemiplegia is not a passive process, but corresponds to a state of muscular activity comparable to the tonic condition of certain muscles in health, *e.g.*, the sphincters. M. Onimus has suggested that this permanent contraction is due to the fact that the muscular fibres are not all contracted at the same time, but that the different fibres enter into activity one after another. Investigations at La Salpêtrière have confirmed the truth of this hypothesis. Muscles in a condition of normal contraction are found by means of the microphone to emit a sonorous, regular *bruit*, whereas the rigid muscles in hemiplegia give an irregular and jerky sound, characteristic of intermittency. The permanent muscular contraction in hemiplegia is due to spinal activity exalted by certain pathological conditions. Agents which increase reflex action provoke or exaggerate the muscular rigidity. Such causes are strychnia, injudicious faradisation, and traumatic influences. Flexion is the predominant attitude of the upper extremities in hemiplegia, whilst extension is the characteristic position of the lower limbs. In some rare and hitherto unexplained cases, contraction disappears from the affected members.

Infantile hemiplegia depends on various causes, such as yellow softening and meningeal hæmorrhage, but most frequently there is partial or generalised sclerosis of one hemisphere. The central ganglia are usually unaffected. As a rule, there is more or less atrophy of the brain, and accordingly these cases are generally known under the name of partial atrophy of the cerebrum. As in other affections of the motor tract, secondary degeneration results, and is accompanied by a series of symptoms, which have been collectively described as spasmodic infantile hemiplegia. There is arrested development of the paralysed members and bones, and sometimes even the thorax and pelvis participate. In the adult, such changes do not occur, since the parts have reached their full development.

M. Charcot brings forward proofs in favour of the existence of two distinct diastaltic arcs. He remarks, for instance, that in locomotor ataxy the tendon reflexes may be profoundly affected, whilst the cutaneous reflexes may remain unaltered.

An interesting account is given of spasmodic paraplegia, or, as it is called by Charcot, spasmodic tabes dorsalis. It is probable that this is a primary affection, due, as Erb has suggested, to sclerosis of the lateral columns. The disease often dates from infancy, is progressive, and is characterised simply by rigidity of the extremities, peculiar gait, and exaggerated tendon-reflexes.

In the concluding lecture, attention is called to spinal amyotrophies. Those affections, in which muscular atrophy is the main symptom, may be grouped together under the generic name of *systematic anterior polyomyelitis*. Infantile and adult spinal paralysis, general spinal paralysis, and progressive muscular atrophy, all depend on lesion of the large motor cells in the anterior cornua of the cord. It must be remembered that muscular wasting may take place secondarily in other spinal diseases, but all such cases depend on the same pathological change. In *sclérose latérale amyotrophique*, there is a combination of muscular atrophy and rigidity of the extremities. In this disease, the alteration affects the pyramidal strands and the motor cells of the spinal cord and medulla.

In conclusion, we strongly recommend this work to all interested in cerebral and spinal localisation, as one of the ablest and most exhaustive contributions to this branch of medicine.

W. B. Hadden, M.D.

Auge und Schädel (*The Eye and the Skull*). By Dr. Emil Emmert, Teacher of Ophthalmology in the University of Bern. Berlin: Hirschwald. 1880.

In a paper-bound volume of 200 pages, Dr. Emmert records a laborious original research into certain of the conditions which are commonly associated with myopia. We believe that, in some points, he has distinctly added to the existing knowledge of this important subject.

Section I describes the examination of 217 children (aged from 6 to 18), with regard to refraction, accommodation, distance between the outer orbital margins, distance between the centres of the pupils, horizontal diameter of the iris, diameter of the pupils, and prominence of the eyes. Mannhardt's theory—namely, that the predisposing cause of myopia is a too great distance between the eyes, and a consequent extra demand upon the internal recti muscles during convergence for near objects—was not confirmed by this examination. Considerable variations in this distance were found in association with each variety of refraction, but they did not justify a general conclusion that the average distance between the eyes is materially greater in myopes than in emmetropes and hypermetropes. Measurements made by Pflüger and Becker have, however, given a result favourable to Mannhardt's theory. It appears, therefore, that further observations on this point are wanted. The diameter of the iris bore no definite relationship to the varieties of refraction. It is worthy of note that the iris of the child was found, on the average, to be equal in diameter to that of the adult. The diameter of the pupil bore no discoverable relationship either to the refraction, the age, or the diameter of the iris.

Section II details certain methods by which the author obtained the internal dimensions of the orbits, and other measurements, in a series of skulls. Diagrams are given to exhibit the results. Certain differences were found in the size and position of the orbits in skulls of different types, and at different ages. The author has, as yet, sought in vain for the opportunity of making similar measurements in cases in which abnormalities of refraction had been noted during life.

Section III deals directly with the causes of myopia, staphyloma posticum, insufficiency of the internal recti, etc. All are agreed that the excessive use of the eyes upon near objects is a leading agent in causing the elongation of the myopic globe; but the author denies—most properly, as we think—that it is the accommodative act which does the mischief. If the accommodative traction upon the choroid were the direct cause of the myopic crescent, this latter should appear on that side of the disc which is nearest to the ciliary muscle—the inner

side; whereas it almost constantly occurs on the opposite side. Any traction exercised here must be transmitted through the region of the yellow spot, where, as Hensen and Voelckers have shown, no choroidal movement occurs. Moreover, although myopia is frequently associated with accommodative spasm, it is in the hypermetropic eye that the strain on the ciliary muscle is the greatest, and here the change in question is relatively rare. Hasner attributes the myopic crescent, and the insufficiency of the internal recti, to an insufficient length of the optic nerve, whereby the latter resists the effort at inward rotation. Though plausible at first sight, this theory is overthrown by the fact that tenotomy of the external recti relieves the difficulty of convergence.

We hold firmly by the view, advocated by Donders amongst others, that the elongation of the globe is due to tension of the sclerotic, brought about by traction of the internal recti during prolonged or excessive convergence; and we believe that Dr. Emmert has discovered a hitherto unrecognised cause of resistance, which, in certain eyes, renders such convergence especially difficult and prejudicial. Adopting dimensions obtained from typical specimens of hypermetropia, emmetropia, and myopia, he constructed an 'ophthalmophantomatrope'—a working model, by means of which many of the physical conditions involved in ocular movements could be experimentally tested. The distance between the optic foramina was fixed at 30 millimètres; the distance between the rotation centres of the eyes was 50, 60, 70, or 80 millimètres, variable at pleasure; and the antero-posterior distance between the rotation-centres and a line passing through the two optic foramina was 25, 30, 35, or 40 millimètres, likewise variable at pleasure. Under these varying conditions, observations were made upon the length of the recti, their contact with the globe, the lengthening and shortening undergone during given excursions, the force necessary to produce these excursions, the length of the radius (*i.e.*, of the lever) on which each muscle acts, and the varying relations of the optic nerve-trunk to the muscles surrounding it; each form of globe being separately examined with regard to these several points. The ease with which movements of convergence and divergence are performed is governed by three factors—the form of the globe; the position of the eyes, with regard to their distance from each other, and from the back of the orbit; and *the pressure exercised by the muscles upon the optic nerve* through the intervening cushion of fat. As regards form, the hypermetropic eye is turned inwards more easily, the myopic less easily, than the emmetropic. For any given distance between the rotation-centres, the difficulty of convergence is increased by a lessened depth of orbit; and, with a given depth of orbit, it is increased by an increased distance between the rotation-centres. Emmert holds that hereditary predisposition to myopia depends, more probably, upon disproportion between these two dimensions (not necessarily an excessive width between the eyes), transmitted through successive generations, than upon a congenital weakness of the sclera, the existence of which has not been demonstrated. Pressure of the muscles upon the optic nerve, through the medium of the fat, occurs more or less in all excursions of the globe. Its amount varies greatly with the form and position of the eyes. We cannot follow the author through the steps and proofs of his argument; suffice it to say that he advances strong reasons for believing that this pressure of the external rectus muscle upon the nerve, during convergence, is the cause of the stretching of the sclera at the outer edge of the disc, the myopic crescent, the obliquity of the disc, the insufficiency of the internal recti, the advantage obtainable by tenotomy of the external recti, and some other features of myopia.

In the final section, the bearing of these observations upon convergent strabismus is considered. We dissent from the opinion that the abnormally easy convergence of the hypermetropic globe is the *cause* of convergent squint. This is going too far, and neglecting the chief factor—viz., the excessive call for accommodation—for very highly hypermetropic eyes, in which the accommodation is in abeyance, do not squint. But we think that this abnormally easy convergence of the hypermetropic globe affords an answer to those who point to the squinting hypermetropic eye as a proof that excessive convergent effort is not an active cause of myopia. We commend Dr. Emmert's researches to all students of ophthalmology.

PRIESTLEY SMITH.

Transactions of the Clinical Society of London. Vol. xiii. London: Longmans, Green, and Co. 1880.

THE new volume of the Transactions of the Clinical Society, just published, is conspicuous for its good qualities. It is considerably larger than any of its predecessors; and increase in size of volumes of Transactions of the learned societies does not generally, certainly not here, carry with it any disadvantage: it is rich in well-executed chromolithographs and plates, and the matter of the letter-press contains much that is of the greatest practical import to the practitioner in all the branches of his work. It is not our practice to go *seriatim* through such publications; to do so, would tax our space severely; and the medical journals, by the full abstracts published of the meetings, week by week, do away with all necessity for such a review. Of the many good papers which this volume contains, we will only mention three, and that for special purposes. The volume would be invaluable if only for Plate II, which gives portraits of two patients suffering from myxœdema. One glance at Fig. 1 is sufficient to enable those who know nothing of the disease beforehand to make the diagnosis. It is also characterised by containing three papers remarkable for the amount of labour which must have been bestowed upon them; that by Mr. Croft, an analysis of forty-five cases of excision of the hip, and the papers on the treatment of rheumatic fever with salicin and salicylate of soda, by the president, Dr. Greenhow. With regard to Mr. Croft's paper, it is a very valuable production, apart from any conclusions which may have been arrived at, in that it places before the profession the whole of the author's personal experience of excision of the hip, which ranges over fourteen years. We could wish that some one of large experience would do the like with excisions of the knee. The amount of information that would be conveyed would be immense, if some one of our younger surgeons would collect together and *exhibit* as many as possible of his cases of excision of the knee over a period of eight or ten years. An exhibition of fifty patients with excised knees, with results good, bad, and indifferent—none left behind—would almost settle the question of the real value of the operation. Will not some one accept the suggestion which

is given by Mr. Croft's paper? And not only is excision of the knee in need of such treatment: osteotomy, we are told, is done in hundreds of cases. Let us see the result in only fifty, provided they are unselected. Till this is done, operations, even of acknowledged value, must bear the brunt of an occasional adverse criticism, since they fail to *demonstrate* their right to the virtues which they claim. Dr. Greenhow, in his presidential address, exhorts the members of the Society to devote a large share of attention to therapeutics; and his papers are at once an earnest of his intentions, and an evidence of his powers.

This volume contains also several reports which should prove of permanent value; and altogether we may say that the thirteenth volume of the Transactions of the Clinical Society sustains the prestige of its members, and does credit to the indefatigable honorary secretaries, upon whom much of the labour of publication naturally devolves.

James F. Goodhart.

Osteotomy, with an Inquiry into the Ætiology and Pathology of Knock-Knee, Bow-Leg, and other Osseous Deformities of the Lower Limbs. By William Macewen, M.D., Surgeon and Lecturer on Clinical Surgery, Glasgow Royal Infirmary. London: J. and A. Churchill. 1880.

Dr. Macewen has for some years past been prominent amongst those surgeons who advocate osteotomy for bony deformities resulting from rickets or other causes; hence his monograph on this important subject has been received with interest. In the opening chapters, the subject of rickets, and its connection with genu valgum, varum, and other bony curves of the lower extremities, is considered. In the fifth chapter, the unsettled question of the exact pathology of knock-knee is fully entered into, and details of special inquiries instituted by the author are given. An inward curve of the lower third of the femur, which lowers the internal condyle, is thought to be the most constant factor in cases of genu valgum. Secondly, Dr. Macewen believes there is a distinct elongation of the internal condyle, together with an enlargement of the same in an inward direction, and an antero-posterior flattening. A wood cut, taken from Mikulicz's paper in Von Langenbeck's *Archives* for 1878, has been reproduced. This shows that, on the inner side of the diaphysis of the femur, an increased osseous development is found, which, while it displaces the condyle, does not cause any relative increase in its size. In only about one-third of the total cases, the upper end of the tibia has been found to aid in the formation of the deformity. Whatever may be the exact conditions existing in genu valgum, the malady can be undoubtedly remedied by an osteotomy through the lower end of the shaft of the femur, as first advocated and practised by Dr. Macewen, and performed several hundred times with only a fatality of three, and these due to causes unconnected with the operation. Particulars concerning these points are fully set forth. The methods of operating pursued by Ogston, Chiene, Reeves, and others, are discussed; the non-operational plans of treating genu valgum are also briefly mentioned. Genu varum, with regard to its pathology, and the method of osteotomising for its relief, is considered. A plan of calculating the exact size of the wedge to be removed in an antero-posterior curve of the tibia will be read with interest. The splints which Dr. Macewen generally uses in his after-treatment are described and figured, and illustrative cases of the various deformities will be found. Strict antiseptic precautions are always taken by the writer during the performance of any osteotomy, and the results here recorded are ample proofs of the dexterity of the operator and the efficacy of Listerism. This work is a much needed reference for those who wish to treat osseous deformities surely and quickly by means of osteotomy. Thomas F. Chavasse.

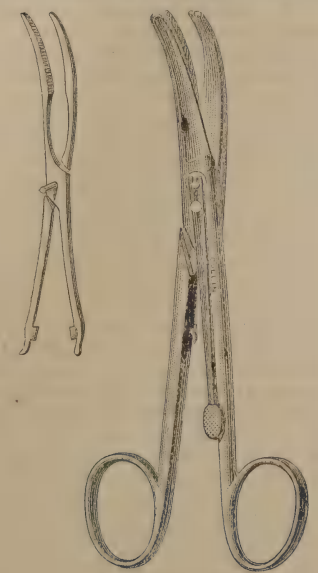
NOTES ON BOOKS.

Dr. Henry Thompson publishes a volume of *Clinical Lectures, and Cases, with Commentaries* (London: J. and A. Churchill), which he describes as a farewell legacy to his students and colleagues at the Middlesex Hospital. Dr. Henry Thompson has pursued a quiet, unobtrusive, and useful career; and only his extremely retiring and modest disposition has prevented his obtaining a much more prominent position, and taking a much more active part than he has done in medical affairs. He discusses many subjects of considerable clinical interest with acuteness and learning. Among them may especially be mentioned acute rheumatism, its treatment by cold baths; diseases of the heart and chest, including a careful study of some cases of pneumo-thorax, treatment of diabetes with opium, etc. Many of the lectures have been before published; and those who are acquainted with the graceful study and scholarly method of Dr. Thompson will be glad to have the lectures here collected, while all will read them with interest, as a retrospective view of good clinical work. Ernest Hart.

NEW INVENTIONS.

DR. WARLOMONT'S HÆMOSTATIC SCISSORS.

The leading idea embodied in this instrument (described in the *Annales d'Oculistique*, July-August 1880) is the superposition of a pair of scissors on a



pair of hæmostatic forceps. The scissors and forceps move together, and as one divides the tissues

the other compresses them, and effectually restrains all hæmorrhage for the time being. The inventor intended the instrument originally for enucleation, but it can also be utilised in the most important surgical operations. It is made by Colin of Paris.

MISCELLANY.

ESMARCH'S PAINLESS CAUSTIC-POWDER, for the removal of morbid growths, cancer, etc., is prepared after the following formula, given by Dr. E. Andrews in the *Michigan Med. News* :—Take arsenious acid, 1 part; sulphate of morphia, 1 part; calomel, 8 parts; powdered gum Arabic, 48 parts. Mix. Sprinkle thickly every day on a surface, either raw or denuded of cuticle by a blister.

CHAPPED NIPPLES.—Chapped nipples are, according to a formula published in the *New York Medical Record*, treated either with glycerole of the nitrate of lead in a solution containing from 20 grains to 1 drachm to the ounce, or by a mixture of 2 drachms of iodoform to the ounce of balsam of Peru. The balsam is used because it disguises the smell of the iodoform.

AMERICAN SURGICAL ASSOCIATION. — Drs. Gross, Douglas, Weiss, and Lewis A. Sayre, with other distinguished American surgeons, have founded a society which will, like the Congress of Surgeons in Germany, meet once a year for a three days' session. There will be 125 members only, 100 active, 25 honorary, of the latter 10 Americans, and 15 foreigners. Only those are eligible who have distinguished themselves as writers and teachers, or by their original researches. Dr. Samuel D. Gross has been elected president.

NON-POISONOUS PRESERVATIVE FLUID.—The *Ohio Med. Record* states that Wickerscheimer's fluid has proved an utter failure in preserving subjects, and quotes Heger's formula for an effective preservative and antiseptic as follows :—Take salicylic acid, 20 parts; boracic acid, 25 parts; potassium carbonate, 5 parts; dissolve in hot water, 500 parts; glycerine, 200 parts; then add oil of cinnamon, oil of cloves, each fifteen parts; dissolve in alcohol, 500 parts. It is an exterminator of moths and vermin and has a pleasant odour.

THE ADMINISTRATION OF BROMIDE OF POTASSIUM. —Many patients refuse to continue to use bromide of potassium from its intensely bitter salt taste. This taste is, according to the *Canada Med. and Surg. Journ.*, easily overcome by giving three drachms of simple syrup with each drachm of the bromide. The three drachms of syrup, if properly made, should contain about 150 grains of sugar. This completely alters the taste, giving it an agreeable nutty flavour, not unlike to cocoa-nut milk, if largely diluted. Children take it with avidity. The sugar in no way alters the medicinal virtues of the drug. This formula is a boon to epileptics and others who have to persevere in large doses of the bromide.

UTRECHT PRIZE COMPETITION.—The Utrecht Society of Arts and Sciences have lately offered prizes for essays on the following subjects :—Researches on the development of one or several invertebrate species of animals whose history is not yet known; exact anatomical description of the larva and nymph of the common cockchafer (*Melolontha vulgaris*); means of purifying the rivers of Holland so as to render them potable, and expense of application on a large scale; results of experiments in recent times as to the movement of liquids and the resistance they offer to moving bodies; study of the theories of electric phenomena in muscles and nerves; critical *aperçu* of the methods for determining the place occupied in bodies of the aromatic series by substituted atoms and groups of atoms (according to Kekulé and Ladenburg's theory regarding benzol); quantities of heat liberated or absorbed in the allotropic change of two or several simple substances; heat given by the moon in different phases. Papers may be written in French, Dutch, German, English, or Latin, and must be sent to the Secretary, Baron R. Melvil, of Lynden, before Dec. 1, 1881. The prize is a diploma of honour and 300 Dutch florins.

THE RELATIONS BETWEEN FLOWERING PLANTS AND ANIMALS.—Professor Calderwood recently delivered a lecture at Glasgow on plants and insects, in which he treated of the relations of higher and lower organisms—flowering plants and insects. The results of investigations, he said, showed a striking degree of inter-dependence between lower and higher organisms. The pollen of the flower, which contained a fluid protoplasm, was conveyed to other flowers by insects, thus showing the dependence of a lower organism on a higher for its existence, and therefore was in contrast with the theory of evolution. There was also a testimony in favour of evolution. In length of proboscis, formation of limbs, and other features, insects had undergone adaptation of structure to the plants from which they drew their nourishment. They had, however, a higher problem to solve—how were they to account for the adaptation of distinct organisms to aid each other in the work of development? Speaking finally of insects, Professor Calderwood quoted Sir John Lubbock with reference to their position in the order of development. Sir John said that, though the anthropoid apes ranked next to man in bodily structure, ants claimed that place in the scale of intelligence. Once he had watched an ant working, and it worked from six in the morning to ten at night without intermission, carrying 187 larvæ to its nest. Professor Calderwood said that it became apparent that anatomical structure was not in itself an adequate guide in determining comparative importance in the scale of organic existence, and that even comparative brain structure could not be taken as a sole test of the measure of intelligence. The whole order of ants presented quite exceptional difficulties for the theory of evolution, and also for the theory of intelligence, which seeks to account for it by complexity of brain structure.

INOCULATION OF THE SALIVA FROM A HYDROPHOBIC PATIENT.—A boy lately died at the Sainte-Eugénie Hospital, Paris, of hydrophobia. His saliva, taken four hours after death, was found by M. Pasteur to have remarkable properties, causing what appears to be a new disease. Two rabbits immediately inoculated with the saliva diluted died in about 36 hours. Other rabbits were inoculated with the saliva, or with the blood of the first, and death ensued even more rapidly. The process was several times repeated, and with like effects. The animal, in five or six hours, loses appetite, afterwards becomes weak and paralysed, and at length dies of asphyxia. The windpipe is a good deal congested, and shows hæmorrhage. There is also a swelling of the glands on each side, and of the groin and axillæ, etc. M. Pasteur has observed in the blood of the inoculated animals a small organism, which (by his method of artificial cultivation) he finds good reason to regard as the agent of the malady. It is a very short rod, slightly contracted about the middle; a sort of aureola appears round it, probably due to mucous substance. It is somewhat like the microbium of fowl-cholera, but differs entirely in its effects. Fowls inoculated with it are not in the least affected. It is further singular that, while the rabbit is always quickly killed by the effect of inoculation, the guinea-pig, closely related to the rabbit, retains its vigour and appetite weeks after inoculation. Whether there may not in this case be a long incubation of the virus, remains *sub judice*. The new malady seems thus far distinct from rabies in the absence of the usual incubation, the nature of the anatomical lesions, and the transmission by inoculation with the blood of the dead animal. Further, dogs inoculated with the boy's saliva died in a few days without presenting rabid symptoms. M. Pasteur, however, thinks it would be rash to affirm the absolute independence of the two disorders; and if rabies may be attributed to the presence of a microscopic organism, some hope is offered that science may find a means of attenuating its action.

The London Medical Record.

CHARCOT ON CAUSATION OF ALBUMINURIA.

M. Charcot, in his lectures on this subject in *Le Progrès Médical* (Nos. 47, 49, 1880; and 4, 10, and 12, 1881), begins by drawing attention to certain facts in anatomy and physiology which have some bearing on the occurrence of albuminuria. In the first place, he reminds us that the blood from the cortex of the kidney is returned by straight veins corresponding to the arteriæ rectæ, situated between the bundles of the large straight or collecting tubes. He quotes experiments of Ludwig and Hermann to show that this position is important, as increase of pressure within these veins may compress and obstruct the tubules, while, on the other hand, the circulation in the veins themselves may be embarrassed by over-distension of the tubules.

He next alludes to the anatomical arrangement in the reptiles and amphibia, by which a special venous trunk, analogous to the portal vein, passes to the kidney, carrying to it blood coming from the lower extremities. This vein breaks up into a plexus on the tubules, which terminates in the radicles of the renal vein, but is quite distinct from the circulation of the glomeruli. Hence, when the renal artery is tied in these animals, the function of the glomerulus is completely abolished, and we can distinguish by this circumstance between the functions of the glomerulus and those of the convoluted tubules.

He refers to the experiments of Schmiedeberg, which he considers to establish the fact that urea is a product of renal synthesis. He accepts the current view that the glomeruli separate the water and the salts of the blood-serum, while the renal epithelium secretes the urates and urea. But he refers to the effect of ligaturing the renal artery temporarily for a few minutes, which is followed by suppression of urine for half or three-quarters of an hour, and to the suppression of urine after ligature of the renal vein, as supporting Heidenhain's view that the glomerular epithelium takes some active share in the work of filtration. He quotes Nussbaum's experiments, to show that sugar and albumen are secreted by the glomeruli.

He defines albuminuria as almost always pathological, and due to the presence of serum-albumen or globulin in the urine. Peptones are often found, but their practical importance is not understood. In considering the question whether albumen is secreted by the glomeruli or by the epithelium of the tubules, he quotes the experiments of Ribbert, Posner, and Litten, who found, after producing albuminuria by temporarily ligaturing the renal artery and then coagulating the albumen by removing the kidneys and plunging them into boiling water, that there was an amorphous coagulum in the capsules as well as in the tubules, a proof which was controlled by the negative result of similar observations on non-albuminuric kidneys. Cornil and Browicz have found similar appearances in the kidneys of animals poisoned by cantharides. All these observations tend to show that albumen is separated by the glomeruli. He says there are three principal theories as to the proximate cause of albuminuria: 1, an alteration in the constitution of the blood; 2, a derangement of the general circulation or of the local circulation in the kidney; 3, a modification of the renal epithelium.

The first theory—the hæmatogenous theory—was that of Stokvis, who showed that injection of water into the blood caused albuminuria; but this, M. Charcot says, is not albuminuria, but hæmoglobinuria, resulting from the solution of the red blood-corpuscles; a condition that does take place in typhoid, scarlatina, malignant jaundice, and poisoning by sulphuretted hydrogen and arseniuretted hydrogen.

At present, he would concentrate attention on the question, whether albuminuria proper is not always the consequence of a primary alteration of the blood. It is an old opinion that the albumen of the blood-serum is altered, and in consequence is excreted by the kidneys; and conformably to this view the renal lesions are but the consequence of the prolonged functional derangement. Canstatt was the first to formulate this opinion. He said: 'There are many arguments which tend to prove that the cause of all the symptoms in albuminuria may be sought in an abnormal specific disposition of the albumen of the blood. This disposition, which consists probably in an imperfect quality of this substance, has for its effect to divert the albumen from its nutrient destination, and to turn it towards the kidneys to be there excreted.' Professor Semmola, of Naples, has recently argued in favour of this theory. Prout and Graves held this opinion; Bright himself admitted it for a time; many of his most distinguished contemporaries maintained it. Mialhe attempted to prove this alteration in the albumen of the serum in Bright's disease, but his conclusions were reversed by Becquerel and Vernois. Stokvis and all other authors have admitted the identity of the albumen of albuminous urine with that of normal serum. So far as chemistry is concerned, this seems to have been proved; but their physiological identity has also to be proved. Egg-albumen, when injected into the blood, is excreted by the kidneys, while normal serum-albumen is not. Experiments show that the albumen of albuminuria and the serum of thin blood, when injected into the veins of animals, do not pass by the kidneys. M. Stokvis considered this proof of the identity of the albumen with that of normal blood serum. M. Charcot does not contradict this opinion, but says there are forms of albuminuria called abnormal, in which the albumen differs in its chemical and physical properties from that of the serum. Parkes, Pavy, and Gubler have noted that the albumen is increased after food, and Lépine has shown that such albumen diffuses better than that passed fasting, and that when submitted to artificial digestion it is transformed more quickly into peptone. Also Gerhardt has noticed the presence in fevers of an albuminous body neither coagulated by heat nor precipitated by acids, but precipitated by alcohol; and he regards this as peptone formed in the blood by the high temperature, as may be effected by prolonged boiling outside the body.

The second theory is called the mechanical theory, because it invokes for cause a disturbance of the general circulation or of the local circulation in the kidney, leading to a modification by excess of blood-pressure in the vessels of the organ. But this theory is not quite in accordance with facts. There are cases of increased pressure without albuminuria; and when they do coincide, there is always a third element present. Besides, there are cases of albu-

minuria with low pressure; indeed, Runeberg goes so far as to reverse the ordinary theory, and say that albuminuria depends on decrease of pressure. Runeberg bases his theory on physical experiments, which show that albuminous substances diffuse through an animal membrane inversely to the pressure; but M. Charcot does not think the conditions of these experiments are quite analogous to the state of things in the kidney. [See Dr. von Bamberger's article, below.]

M. Charcot considers that it is wrong to regard it as a general law that transudation takes place when the capillary pressure is increased, and quotes the experiments of Ludwig and Paschutin, which showed that after cutting the nerve going to the fore-limb of a dog, and irritating the cord so as to raise the blood pressure enormously, there was no special increase in the lymph poured out in the limb.

But experiments on the kidney itself show that, when the flow of blood to the kidney is cut off by tying and clamping the renal artery, the urine ceases to flow; but if it be only diminished by partial occlusion of the artery, the urine is scanty and albuminous; while precisely the same result follows ligature and partial occlusion of the vein. In these two experiments the conditions of pressure must be reversed, but in both the rapidity of the blood-current is slackened; that is to say, albumen is secreted under those conditions which, according to physiologists, diminish the secretion of water. So we find, in fact, in all cases of albuminuria supervening in consequence of disturbance in the renal circulation, the quantity of water is diminished. M. Charcot concludes in the following words 'Thus, in every case where disturbance of the general or local circulation determines albuminuria, it is, I repeat, neither the increase nor the decrease of the intraglomerular blood-pressure that is in fault; it is the retardation of the blood-current, and consequently the prolonged sojourn of feebly oxidised blood in the renal capillaries. We thus find here again those conditions of anoxhæmia of the epithelial cells of the glomerulus, which physiology has taught us to regard as unfavourable to the secretion of urinary water. These are the same conditions which preside over the secretion of albumen, and this circumstance explains the remarkable fact, that in the albuminuria allied to circulatory troubles the urine is scanty at the same time as it is albuminous.' ROBERT SAUNDBY, M.D.

VON BAMBERGER ON HÆMATOGENIC ALBUMINURIA.

DURING February last there appeared, in the *Wiener Med. Wochenschrift*, a very able article from the pen of Professor von Bamberger on hæmatogenic albuminuria. In it the author chiefly devotes himself to an attempt to refute by criticism and by experiment the assertions of Runeberg (see LONDON MEDICAL RECORD, March 15, 1879) as to the filtration of albuminous solutions under pressure. It is now some years since the first of Runeberg's papers was published, in which he gave details of numerous experiments, which went to prove that solutions of albumen filtering through animal membranes behaved an altogether exceptional manner. He found t when the pressure under which the fluid filtered reased, the percentage of albumen in the transing fluid diminished, and conversely, under lower essure, the albumen passed through in higher proportion. The same author subsequently published another article, in which he sought to apply to practical medicine the theory he had formed. He held that, in all cases of albuminuria in which that condition was not occasioned by pathological changes in the renal tissue, it was brought about by a diminution of the pressure in the Malpighian tufts. Bamberger now points out that Runeberg in his experiments has mixed up two factors which ought to have been kept distinct, viz., the increase of pressure and the increase of rapidity of flow; and he has repeated those experiments with fluids at rest, so as to eliminate that source of error. The fluid to be filtered was placed in tall glass vessels of uniform size, closed at the lower end by means of an animal membrane. The height of the fluid was the same in each glass, but in one there was added a layer of oil so as to increase the pressure. It was found that, when the pressure was greater, not only more fluid transuded, but also more albumen passed through the membrane. An analogous result has been obtained by Gottschalk very recently; and Bamberger considers it proved that the physical basis on which Runeberg founded his theory is incorrect. But, while hæmatogenic albuminuria cannot be ascribed to diminished pressure within the Malpighian tufts, Bamberger does not believe it can be referred to increased pressure, since an arterial pressure much above the normal may exist for long without giving rise to any albuminuria. He believes the true cause to be the increased slowness of the circulation in such cases. Just as the blood-corpuscles are enabled to attach themselves to the walls of the vessel, and to pass out into the neighbouring tissues much more readily when the blood-current is slow, so in the same way albumen-particles may be expected to behave. Certainly retardation of the current leads most surely to albuminuria, when it is accompanied by dilatation of the vessels and increase of blood-pressure. Bamberger also admits the possibility of other causes bringing about hæmatogenic albuminuria, such as functional alterations in the Malpighian tufts without recognisable anatomical lesion, vasomotor changes, chemical alterations in the blood, etc.

J. GRAHAM BROWN, M.D.

ECHEVERRIA ON SYPHILITIC EPILEPSY.

A GREAT deal of light is thrown upon various points in connection with the natural history of this disease in a valuable paper by Dr. M. G. Echeverria, of New York, published in the *Journal of Mental Science* for July 1880. He has passed in review no fewer than 618 cases of epilepsy of all kinds, of all of which the etiology was well known. The basis of the present paper consists specially of observations made upon a series of 118 cases of syphilitic epilepsy (65 males and 53 females).

Fournier has held that there is an epilepsy of secondary syphilis, distinct from the tertiary form. Dr. Echeverria admits that epilepsy may suddenly occur simultaneously with the early phenomena of constitutional syphilis, but states that the manifestations of the epileptic malady are essentially the same as in any other case, nothwithstanding its specific cause, and its inception at an earlier or later period of constitutional syphilis. Precocity in the evolution of epilepsy depends altogether on the nature of the soil, that is, the nervous predisposition of the patient, and not upon conditions connected with the

stages of the syphilitic diathesis itself. The irruption of the first epileptic attack took place at the following dates after the acquisition of syphilis:—24 cases (M. 9, F. 15) from 4 months to 1 year; 36 cases (M. 16, F. 20) from 1 year to 2 years; 21 cases (M. 13, F. 8) from 2 years to 5 years; 20 cases (M. 15, F. 5) from 5 years to 8 years; 12 cases (M. 9, F. 3) from 8 years to 12 years; 5 cases (M. 3, F. 2) from 12 years to 20 years; total, 118 (M. 65, F. 53). In almost every one of the cases which commenced during the secondary period it was possible to recognise some predisposing cause which had diminished the resisting power of the nervous system. The opportunities of demonstrating material lesions of the nervous centres in cases of secondary syphilitic epilepsy are necessarily rare; but two cases are given by the author, in which manifest pathological changes were found in the membranes, cerebral hemispheres, medulla, and sympathetic ganglia.

Deducting from the whole series those cases in which the onset of epilepsy took place during the secondary period of syphilis, there remain 93 patients who exhibited unmistakable signs of tertiary syphilis, and 9 without any appreciable external manifestation of the diathesis, notwithstanding the previous existence of chancre and inguinal adenitis, at a more or less remote date from the outbreak of the epileptic attacks. The diagnosis of these last-named cases is not so obscure as it would at first appear, on account of the mark deeply stamped on the disease by its peculiar evolution and symptoms.

The pathological changes seen in the encephalon in cerebral syphilis are, as is well known, chiefly in connection with the circulatory system, interstitial tissue, and the membranes; there is, however, a proportion of cases, not exceptional, in which the nutritive histological changes, effected by syphilis, primarily arise in the nervous elements themselves, without impairing the vascular or interstitial structures of the nervous centres. Two cases are related as examples belonging to this class, one of epilepsy, and one of spasmodic dorsal tabes. In 21 necropsies of syphilitic epilepsy the cerebral lesions were located as follows:—general, throughout the brain, in 8 cases; the motor zone, 4 cases; temporo-sphenoidal region, 2 cases; occipital region, 3 cases; base of the skull, 4 cases. In 10 of these cases there was atheromatous or sclerous degeneration of the arteries, twice with aneurism of the right Sylvian artery, and once of the basilar. In the remaining cases the lesions consisted of gummy tumours on the cortex, or in the substance of the hemispheres and ganglionic centres, or of cerebral sclerosis.

Syphilitic epilepsy does not explode, as most writers state, in the midst of apparent good health. Violent pain in the parietal or frontal regions, generally spreading all over the head, precedes, very often for weeks or months, the accession of the first fit, and continues thereafter equally relentless. A præcordial distress or pain, of a decidedly paroxysmal form, with a dizzy or vertiginous feeling of short duration, often accompanies the cephalalgia. The first epileptic attack was preceded by cephalalgia in 83 cases, and by præcordial pain in 59 cases. The cephalalgia was not referred specially to the region of the motor zone, but seemed to affect all parts of the head indifferently. The epileptic attacks did not generally explode when the pain was most intense, but, on the contrary, at a moment of remission, and often at a moment when the patient had appeared very somnolent.

With regard to cases of partial convulsions, among 26 patients with parietal cephalalgia, 8 had the convulsions on the same side as the pain, 11 on the opposite side, and 7 in all the limbs. Two males with pain in the supra-orbital region had convulsions on the same side as the pain, 4 others on the opposite side, and in 13 the convulsions were general. Five patients with occipital pain had unilateral convulsions. Charcot has called attention to the crossed disposition of the parietal pain and the convulsions, in certain cases of syphilitic epilepsy. The above observations tend to show that this occurrence is not constant, and probably only accidental, when it occurs.

The 'muddy pallor and dazed expression' noted by Buzzard as a sign of neuro-syphilis, is seen in many patients previously to the first attack. It becomes more conspicuous during the progress of the epileptic malady. The author noted it in ninety of his cases.

It is notorious that convulsive disorders, the result of syphilis, occasionally occur without sufficient evidence of constitutional accidents to demonstrate their specific nature. In doubtful cases, the criterion for recognising the specific nature of the epilepsy is the singular evolution and disjointed series of paralytic symptoms engrafted on it, and, above all, the beneficial effects of specific treatment. Although syphilitic nervous affections may occur at a very remote period from the date of infection, the author has not seen this anomalous neuro-syphilis developed at a later period than four years after the undoubted existence of the infecting chancre.

In addition to the cephalalgia and præcordial pain mentioned above as premonitory symptoms, mental confusion or depression, loss of memory, apathy, and change of character, are noted in 76 cases; sleeplessness in 81; and dyspeptic trouble in 95.

With regard to epilepsy entailed on inherited syphilis, the author asserts that he has never seen it appearing after the age of adolescence; and in all instances, whether the fits began in early childhood, as they usually do, or later, the patients had suffered in first infancy from specific affections, leaving indelible marks of their existence.

Intemperance and traumatic injuries to the head, associated with syphilis, favour in the highest degree the development of epilepsy in its worst forms, without any prolonged period of incubation. Intemperance was noted in 67 cases, and was associated with injuries to the skull in 5. Frequent maniacal paroxysms were displayed by patients with injuries to the head, whereas those of intemperate antecedents usually exhibited, on the contrary, dulness and abasement with constant insanity. Slow lead-poisoning acted in conjunction with syphilis to produce epilepsy in two males, who quickly recovered.

There is no difference between the fits of syphilitic epilepsy and those acknowledging other etiology. Ivaren and most French authors state that syphilitic epilepsy is generally nocturnal; but the assertion is not sustained by the analysis of these 118 cases, for only 7 patients had fits which were nocturnal from the beginning and continued so.

With regard to the age at the beginning of the fits; in cases of inherited neurotic predisposition, or syphilitic taint, epilepsy was developed during childhood, or in the prime of puberty; in cases of secondary syphilis, at ages varying from 19 to 30 years; and in cases of tertiary syphilis, from 27 to 53. Fournier considers that in nine cases out of ten, when epilepsy commences after 30 or 35 years of

age, it is due to syphilis. Echeverria reports that, of his larger series of 618 cases, no fewer than 164 (26.5 per cent.) became affected with epilepsy after 25 years of age from various exciting causes other than syphilis. Similar results have recently been arrived at by Gowers. It would appear that intemperance, injuries to the head, and the other causes of epilepsy taken collectively, all cause a larger number of cases of epilepsy in adult or mature age than does syphilis.

It is commonly stated that the convulsions in syphilitic epilepsy are seldom bilateral, but in the author's 118 patients the convulsions were—equally strong in the four limbs in 23 cases; general, but with greater violence in the limbs on one side, in 53 cases; and decidedly unilateral, or limited to the arm and the head, in 29 cases only. In 12 cases there was *petit mal*, with slight convulsions in the muscles of the face and in the pupils. Therefore, it would seem more correct to state that in syphilitic epilepsy, general convulsions with greater intensity in one limb, or in the two limbs of one side, exist oftener than the unilateral or partial convulsions, no great difference existing as to the frequency of the two latter separately.

Syphilitic epilepsy is commonly attended with hemiplegia, or local paralysis, of a transient or persistent character. This accident displays, in its occurrence and relationship to the other symptoms, a sort of disjointed connection, which is a pathognomonic sign of syphilitic paralysis. Permanent paralysis occurred in 64 of the cases. A careful analysis of the various paralyses observed is given.

In 16 males and 10 females, double optic neuritis existed without any paralytic symptoms, and, very often, as has been noted by Hughlings Jackson, without impairment of vision at the time when it was discovered. This condition was present, not only when the symptoms plainly evinced a syphilitic deposit pressing on the optic nerves, but also when there were no signs of such a cause for the consecutive atrophy of the optic discs. It is frequently met with in those cases of syphilitic epilepsy which exhibit no remarkable external evidences of the diathesis, and is associated with pain in the head, and sometimes paralysis of the third nerve, or of the sixth. This condition was observed in 17 of the 26 cases. Eleven patients exhibited choroiditis and retinitis in conjunction with their fits. All, but one male, recovered perfect sight under specific treatment. Two of the males and three females had secondary syphilis, and one of the latter presented double iritis.

Mental disorders may be the forerunners, but more commonly they are the sequel, of the attacks of syphilitic epilepsy, which again may assume the larvated or mental form. One of the striking singularities of these insane cases, particularly if they arise from syphilis conjointly with alcoholism or injuries to the head, is the great propensity of the patients to unprovoked violence. Of the 65 insane patients, 18 males and 17 females exhibited symptoms entirely like general paralysis, and of them, only 7 males and 3 females recovered under specific treatment.

Dr. Echeverria's treatment was as follows. In secondary cases mercury was resorted to, being used from the beginning in conjunction with iodide of potassium. In tertiary cases, large doses of iodide of potassium, from thirty grains to as much as two drachms, according to the gravity of the affection, were given three times a day, accompanied by mercurial inunctions, or the use of the calomel bath. The result of the treatment was complete recovery in 21 males and 23 females; 11 males and 5 females had a recurrence of the fits after having remained from eight to fourteen months without them. In 8 males and 7 females, who were very cachectic, the treatment did not produce any considerable change, and the final issue was unknown in 13 males and 10 females, who were benefited by the treatment, but were lost sight of before being completely cured.

In the course of this interesting and exhaustive paper, about twenty cases are related in detail.

C. S. W. Cobbold, M.D.

OLLIER ON RESECTIONS OF JOINTS AND ANTISEPTIC DRESSINGS.

In a recently published memoir (*Revue Mensuelle de Méd. et de Chir.*, No. 12, 1880) M. Ollier points out in the first place that the value of the antiseptic method in resections of joints varies according to the nature of the indications for the operation. The category of what are called orthopædic resections, the sole object of which operations is the restoration of the form and function of an ankylosed joint, has profited the most from antiseptic practice. In recent times, and since the introduction of the antiseptic method, the indications for operation on deformed joints and distorted bones have multiplied to such an extent that this chapter of surgery, M. Ollier states, requires now to be wholly rewritten. With regard to the utility of antiseptic dressings, on the other hand, in cases of traumatic and pathological resections, it is necessary, in order to appreciate this, to distinguish whether such operations are performed for suppurative or for non-suppurative lesions. In the class of non-suppurative lesions, comprising recent articular fractures, plastic osteo-arthritis of rheumatic or traumatic origin, and neoplastic affections, the antiseptic method can be applied with almost as much advantage as in the category of orthopædic resections. In cases, however, of chronic inflammatory lesion with suppuration, the presence of numerous fistulæ, and the formation of fungoid tissue within the joint and along the fistulous tracks, the case is different, and the surgeon cannot obtain complete immediate reunion after resection, and has, during the after-treatment, to deal always with more or less abundant suppuration. Still, in such cases, this suppuration is considerably diminished by carbolised dressings, and in all kinds of traumatic and pathological resections, antiseptic methods, according to M. Ollier, are imperiously demanded.

The antiseptic method, whilst it has extended the range of operative surgery in one region of articular and osseous lesions, has contracted its application in another. As this method prevents suppuration after an orthopædic or a primary traumatic resection, so also will it act after an accidental wound into a joint with fracture of the articular extremities of the long bones, and thus prevent the complication which alone indicates resection in many of such cases. In many traumatic lesions of this kind, antiseptic cleansing of the wound, and the removal of detached splinters will, it is stated, suffice for the preservation of the limb; and in others, a more or less extensive removal of fragments will replace a true resection. Thus the antiseptic treatment has reduced very much the number of primary traumatic resections, and especially those resections called by M. Ollier preventive, because they have been practised with the view of preventing the dangers to which formerly

the subject of a contused wound of a large joint was always exposed.

During six months of the past year, M. Ollier, applying exclusively Lister's method of antiseptic dressing, performed seventeen resections of large joints, one resection of a pseudarthrosis, and two operations for osteotomy. In all these cases, the patients, so far as concerned the immediate result of the operative treatment, recovered without the occurrence of any infectious complications. M. Ollier, deprecating any desire to exaggerate the merits of Lister's antiseptic method, states that, in comparing this series of cases with those previously observed by him, he is compelled to recognise the fact that in the Hôtel-Dieu of Lyons he has never had a series so invariably satisfactory, with regard both to the simplicity of the processes of cicatrisation and to the final result. Through comparison of a series of cases of any operation treated with Lister's dressing with analogous series of cases treated by other antiseptic methods, M. Ollier has been led to give the preference to the former. During the last four years he has performed resection of the elbow in thirty-two cases, in all of which the patients recovered. In nine only of these cases was Lister's dressing applied. In some the wound was uncovered; in some it was treated according to a plan of so-called immovable antiseptic occlusion, and in others by an imperfect dressing of carbolic acid. But though these different methods had all the same result with regard to the preservation of life, they varied with regard to complications. Whilst in the nine cases treated strictly according to Lister's method, no serious complication was observed, in many of the other cases the cicatrising process was interrupted. In five of these last cases erysipelas occurred, and in two local gangrene. From his own experience of Lister's dressing in cases of resection, M. Ollier has made out that this prevents inflammation of wounds without arresting the physiological processes of repair. The cicatrisation and repair of osseous structure progress equally with the reunion of skin, and are not affected by the antiseptic treatment. Indeed, the organisation of bone, and the ossification of the periosteal sheath, are rather accelerated than retarded by this plan of dressing, since this protects the wound and the internal layer of granulation-tissue from danger of infection. In every case of resection treated according to Lister's method, whether the operation be practised for deformity, injury, or chronic disease, M. Ollier endeavours to establish free drainage by a multiplicity of tubes, and refrains from applying sutures along the whole extent of the wound. In cases of chronic joint-disease, where the synovial membrane is much thickened and vascular throughout, the superficial portion is excised or scraped away, and the deeper portions destroyed by the actual cautery or some chemical agent (chloride of zinc, nitrate of silver, perchloride of iron). Thorough ablation of this thickened granular layer is not practised by M. Ollier in every case. Though it may be right to attack with the curette all tuberculous fungosities, and whatever tissue resembles such structures, it should not be forgotten that the exuberant fungous growths about fistulous tracts either waste or become further organised, after, through the extraction of a sequestrum or some other dead material, the source of the suppuration has been removed. The thick granular layer of a diseased joint, when the result of simple inflammation, is useful, M. Ollier thinks, after it has been altered, in the repair of the bones and the articular structures, and, therefore, ought not to be wholly removed. A portion only should be cut or scraped away, or the surface should be touched by the actual cautery, which is regarded as an excellent agent for converting a fungous into a plastic process. The subsequent suppuration in this part of the wound will, it is stated, be of no consequence so long as the superficial structures and the edges of the wound do not become inflamed, and so long as fever and symptoms of septic absorption are absent. Lister's antiseptic method is of great value, M. Ollier holds, when applied in cases of subperiosteal resection. By preventing inflammation, this method guards against destruction of the osteogenetic elements attached to the inner surface of the periosteum, and arrests any diffuse suppuration which, besides the accidents common to all resections, would prove a positive obstacle to the accomplishment of the processes of repair. In almost all cases of resection, Lister's method is valuable, not only in guarding the patient against dangerous septic affections, but also, as it accelerates the healing of wounds, in its enabling the surgeon to arrest, after the operation, those changes in muscular and nervous tissue which are the result of prolonged suppuration, associated with prolonged immobility of the limb. The application of Lister's method, in cases of severe open wound of a bone or joint, should, in M. Ollier's opinion, lead to a difference in the treatment of such injuries. In case of a wounded joint with fracture, instead of resorting to a resection, that is to say, to an operation consisting in the removal of all free fragments, and in bringing together the ends of the remaining portions of the injured bones, the surgeon might rest content in freeing the wound of foreign bodies and loose fragments of bone, leaving in place the fragments that are still covered by periosteum, and even such as have been partially denuded. It is not the injury itself, M. Ollier points out, that causes the death of such fragments, but the inflammation and suppuration following such injury. Such fragments, as is well known, in cases of simple fracture usually unite with the rest of the injured bone.

A case of partial resection of the tibio-tarsal joint is reported, to show the good results of Listerism in operations for the partial removal only of one or both opposed surfaces of bone forming an articulation.

In conclusion, M. Ollier protests against an unnecessary and too widely extended application of operative surgery with antiseptic precautions to deformities of the skeleton and its articulations, which have hitherto been regarded as amenable to ordinary orthopædic treatment. W. Johnson Smith.

FRAENTZEL ON IDIOPATHIC ENLARGEMENT OF THE HEART.

Under the term enlargement of the heart are generally included three anatomical conditions; first, where the cardiac cavities are increased and the cardiac walls thickened in direct ratio—simple enlargement; second, where the cavities are increased and the walls thickened, but the cavities in higher degree—excentric or dilated enlargement; and third, where the cavities are actually diminished by the thickening of the walls of the heart—concentric enlargement. Doubt has been thrown on the existence of this last class of cases; and, in some recent remarks on the subject, Professor Fräntzel of Berlin (*Berl. Klin. Woch.*, Feb. 1881), protests against the terms excentric and concentric cardiac

hypertrophy. His distinction of idiopathic enlargement of the heart into dilatation *with* and dilatation *without* hypertrophy is undoubtedly the expression of a difference of first importance clinically. Hypertrophy, speaking broadly, means life; its absence indicates impending death. The conditions of its development are chiefly the vigour of the patient and the gradual development of the resistance producing the enlargement. For the left ventricle, its presence is shown by high tension of the radial arteries, abnormally resistent heart's impulse and marked or ringing second sound in the aorta; while, for the right ventricle, the only sign is marked or ringing second sound in the pulmonary artery. As to the percussion of the heart, Dr. Fräntzel emphasises that it is not simply what we find, but the interpretation thereof, that is important. The actual projection outline of the heart he believes it is impossible to discover; but should the percussion note over the body of the sternum be duller than over the manubrium, he considers we may diagnose cardiac enlargement to the right, that is, in general, dilatation of the right ventricle. A dulness extending beyond the usual triangle of cardiac dulness indicates, in the absence of disease of the neighbouring organs, an affection of the heart, either fluid in the pericardium or dilatation of a cardiac cavity, according to the position and shape of the dulness. The obverse of this, however, is by no means invariably true. A dulness not extending beyond the above-mentioned triangle is in no way a sure indication of the absence of dilatation. A heart's dulness of normal dimensions in a *wide* thorax, according to Dr. Fräntzel, indicates dilatation; and again, in the barrel-shaped chest, where no heart's dulness ought to be found, the presence of dulness at all indicates a most pronounced dilatation. Such a diagnosis made some time before death may be contradicted, Dr. Fräntzel says, by the necropsy, but this he holds to show simply that dilatation, like hypertrophy, may regress on the causes ceasing to act.

In enumerating the causes of idiopathic enlargement of the heart, Dr. Fräntzel makes special mention of those cases of a single great bodily exertion which, by acute distension of the left ventricle, may cause irreparable cardiac debility, leading to rapid death. This, we may presume, he has observed mostly in persons well on in years. A rush to catch a train may cut half a score of years or more off a comparatively healthy man's life. In discussing obstructions to the circulation in the lungs and kidneys as causes of cardiac enlargement, he seeks to explain the enlargement of the left ventricle in kidney-disease by the obstruction to the renal circulation. He ignores apparently the frequent want of concomitancy between the amount of cardiac enlargement and the degree of renal disease, and refuses the more modern explanation which regards both diseases as local manifestations of a common disease, in all probability acting and reacting on one another. With regard to the large class of cases in which cardiac enlargement is attributed to arterial sclerosis, Dr. Fräntzel agrees with Traube in considering both the arterial sclerosis and the cardiac enlargement to be the results of a common cause, namely, high systemic tension, produced either by gluttony and drunkenness, or by hard labour. Both classes, he says, benefit much by purgatives, combined in the former with opium, in the latter with absolute rest.

JAMES ANDERSON, M.D.

ROSENSTEIN ON A CASE OF INCISION OF THE PERICARDIUM.

PROFESSOR S. ROSENSTEIN (*Berl. Klin. Woch.*, 1881, No. 5) reports an unique case of successful incision for purulent pericarditis. The patient was a boy, aged 10 years; his mother had died; he had enjoyed good health until fourteen days ago, since which he had suffered from gastric symptoms, cough, feverishness, and had taken to his bed. On admission, his cheeks were white, lips and tongue pale red; skin moist; temperature 37.6 deg. Cent. (99.6 deg. Fahr.); pulse, small, very soft, regular, and 108; respirations costo-abdominal, 40. The left side of the chest in the mammary region bulged outwards. The apex-beat could be neither seen nor felt; and the heart-sounds were inaudible everywhere. Percussion defined an area of dulness, roughly triangular, with the base downwards, commencing in the second left intercostal space, and extending on the left to the axillary line, on the right as far as the nipple. Change from the recumbent to the sitting posture did not alter the shape or the size of the dull area. The lungs were normal; the liver was pushed outwards; the spleen was not enlarged; the bowels were regular; the urine was not albuminous. An exploratory puncture with Pravaz's syringe drew off a small quantity of pure pus; and on the evening of the same day urgent dyspnœa suggested the propriety of paracentesis, which was performed in the fourth interspace close to the sternum, and 620 cubic centimètres of pure pus drawn off by Potain's aspirator. The operation was followed by great relief, but this favourable state was of very short duration. Fever of an intermittent type appeared, the evening temperature being 39.4 deg. Cent. (102.9 deg. Fahr.); the pulse grew more frequent, and the urine became greatly diminished. This was due to serous effusion in the left pleural cavity, and as in a few days the dulness reached the supraspinous fossa, the fluid (1100 cubic centimètres) was removed by aspiration. A second puncture of the pericardium succeeded in removing only 120 cubic centimètres of pus. Percussion showed that the dull area varied with the posture; on sitting up it was 2 centimètres higher than when the patient lay down. The heart-sounds were feebly audible, and accompanied by slight friction. The general state of the patient was unsatisfactory. He slept badly, although the fever was slight (37.4 to 38.0 deg. Cent., = 99.3 to 100.4 deg. Fahr.), his appetite was bad, the pulse was small, 120, irregular, unequal, and paradoxical. The respirations were 44, with orthopnœa. The lips and cheeks were cyanosed, the veins of the neck were swollen. There was some œdema of the scrotum and feet. The urine was scanty, but free from albumen. On the night of the 29th January, he was very restless, with orthopnœa; and the following day the urine was much diminished, and the pulse scarcely perceptible. After consultation, Professor von Iterson made an incision in the fourth interspace near the sternum, about three centimètres (1.2 inches) in length, under strict antiseptic precautions, dissecting down layer by layer until the pericardium was exposed; this was punctured with the point of the knife, and the opening enlarged with a probe-pointed bistoury. A great quantity of pus escaped. Two drainage-tubes were put in the wound, and Lister's dressing applied. The effect on the subjective condition of the patient was considerable; but the pulse and urine remained very low. On the day after the operation the temperature was 38.0 deg. Cent. (100.4 deg.

Fahr.); the dressings were changed on the 1st, 3rd, and 6th of February. The pulse was regular, of fair volume, and the œdema disappeared; the heart-sounds were now distinctly heard, accompanied by friction. On the 19th, the pericardial wound was healed. The left pleural cavity again became the seat of effusion, which was not purulent; afterwards, 1000 cubic centimètres were removed without much improvement resulting, and, the fever having recurred, an incision was made, and 1500 cubic centimètres evacuated; after which the patient remained free from fever, and was discharged on the 12th April.

Professor Rosenstein draws the following conclusions from this case. 1. Purulent pericarditis, like empyema, may occur without rise of temperature or œdema of the surface, so that only puncture can decide the diagnosis. 2. The fear of some obscure changes in the myocardium being the cause of the phenomenon simulating pericardial effusion, should not deter us from evacuating such exudations. 3. In accumulations of large quantities of fluid in the pericardium, change of posture may have no influence on the shape of the dulness.

KŒBERLE ON A CASE OF RESECTION OF A LARGE PORTION OF THE SMALL INTESTINE.

The following is an abstract of the report of an interesting case published by Dr. Kœberlé of Strasbourg, in the *Gaz. Hebdomadaire*, Nos. 4, 5, 1881. The patient, a healthy-looking woman, aged 22, after having suffered over two years from occasional attacks of colic, followed by constipation, was laid up in October last through acute intestinal obstruction, which was relieved on the third day by enemata. This was followed, after an interval of a fortnight, by a second and more severe attack; and subsequently the patient was troubled almost constantly by attacks of colic, which were extremely severe, so that she could not rest by day or by night. The severity of the colic was much increased after the ingestion of food, even when taken in small quantities. With these attacks were associated symptoms of distension of the intestine. The swollen abdomen was soft over its whole extent, and no induration or circumscribed swelling could be felt. The obstacle to the passage of the intestinal contents, it is stated, existed evidently in the small intestine, as the colic affected the umbilical region. The seat of the most severe pain, and of the most marked distension of the abdomen, was the region between the umbilicus and the crest of the left ilium. There were no indications of abnormal distension of the cæcum and the rest of the large intestine. The diagnosis of the case was attended with much difficulty; it could be made out that there were three points of obstruction in the small intestine, but as to the nature and cause of such obstruction, it was found impossible to arrive at any definite conclusion. After unsuccessful attempts during three weeks to relieve the patient by restricting her diet, it was decided, in view of her wretched and hopeless condition, to perform gastrotomy in order to afford, if possible, any remedy for her affection. This operation was performed on November 27. An incision in the linea alba, commenced immediately below the umbilicus and carried downwards for nearly four inches, exposed loops of distended and abnormally vascular small intestine. After the most prominent loop had been drawn forwards, a portion of the small intestine, measuring at least one mètre and a half (58 inches) was gradually exposed, which, in its course from below upwards, presented a constriction, then a considerable distension through collection of fluid, then a round constriction, followed by empty intestine of normal appearance, and finally two other constrictions placed closely together. The rest of the small intestine and the colon were quite empty. The surface of the distended small intestine presented, especially near the seats of constriction, traces of inflammatory fibrinous exudation, and the peritoneal cavity contained a quantity of reddish serous fluid. In face of this condition, M. Kœberlé, after a short hesitation, decided to perform resection of the whole of the affected portion of intestine. All the protruded intestine above and below the strictured portion having been reduced, a double ligature was applied just above the superior stricture, and another just below the inferior stricture. The gut was then cut through with scissors between each double ligature, care being taken to prevent any effusion of fæcal matter into the peritoneal cavity. The portion of intestine between the ligatures was then punctured and exit given to fluid and gas, and, after the whole of the corresponding portion of mesentery had been secured by twelve silken ligatures, was cut away with scissors. In consequence of the number of ligatures that had been applied to the portion of mesentery involved in the operation, it was decided, instead of bringing the two open extremities of the intestine together by suture, to dispose these as in ordinary enterotomy. The two ligatures—the one securing the upper free extremity, the other the lower free extremity of the divided gut—were then twisted and tied together so as to bring the extremities of gut into close contact and side by side, the proximal or gastric extremity being placed above the distal or anal extremity which occupied the inferior angle of the wound in the abdominal wall. The two conjoined intestinal ligatures and the twelve mesenteric ligatures having been fixed externally, the superior half of the wound was closed by deep and superficial sutures. During this operation, which lasted for three hours, there was but very little hæmorrhage, and the patient, although kept under the influence of chloroform during this long period, did not afterwards suffer from vomiting. Three days later, when it was thought that the ligatured portions of intestine had contracted sufficiently firm peritoneal adhesions, the two ligatures were divided and removed, and a caoutchouc-tube was inserted into each of the two open intestinal extremities, and for some distance along each corresponding portion of gut. These two caoutchouc-tubes were then firmly approximated by means of special forceps, and so fixed, in order to cause death and sloughing of the two layers of intestinal wall intervening between the inner portions of the tubes, and thus to convert the double intestinal orifice into a single opening common to the superior and inferior tracts of intestine. On the twelfth day, when the compressed and necrosed portion of intestinal wall had come away, the forceps was again introduced into the wound for the removal of a prominent spur opposite to the single opening into the gut. During the interval between the twelfth and fifteenth days, the mesenteric ligatures were thrown off, and soon afterwards the wound was reduced to a small infundibular opening. On

December 25th there existed but a very small opening, from which gas and some fluid was occasionally discharged. This small fistula was quite closed six weeks after the date of operation. The resected portion of small intestine, when measured by Professor Von Recklinghausen, was found to be more than two yards (2.05 metrès) in length. In this pathological specimen, the intestine presented four contractions, corresponding to four strictures, of which the first two were about five inches and a half apart, and the last two about twenty-two inches. The intervening portions of empty intestine increased gradually in width between the first stricture and the last, and between the third and fourth strictures this increase of width reached its external limit (2⅔ inches to 4 inches). The interior calibre of the strictures diminished in the same direction, the first just admitting a plug a little below half-an-inch in diameter, and the fourth hardly to be traversed by a rod with a diameter of about the sixth of an inch. The muscular wall of the intestine was considerably hypertrophied. The strictures, M. Kœberlé states, were clearly the result of an old suppurative inflammation of Peyer's glands, followed by cicatricial retraction. On the outer surface of each stricture, the peritoneum presented traces of old inflammation.

From this case, and from analogous operations that have been reported, M. Kœberlé points out that the following conclusions may be drawn. 1. Resection of the small intestine may be made for a considerable extent, and two yards and even more may be removed without causing any appreciable disturbance of the function of digestion. 2. If practised under proper conditions, resection of the intestine may be considered as a perfectly admissible operation. 3. In the operation of resection, the surgeon may either (*a*) bring the two ends of intestine directly together by sutures, and endeavour to establish immediate reunion of the abdominal wound; or (*b*) establish an artificial anus and perform consecutive enterotomy; or, again (*c*), make an incomplete suture of the intestine, associated with an artificial anus. In the second and third of these operations, the patient is least exposed to secondary dangers. 4. The resection of fibrous and cicatricial strictures, which are probably more frequent than is usually exposed, may result in radical cure. On the other hand, in cases of cancerous obstruction, resection can afford only temporary relief. 5. By keeping the intestine closed after the operation, as was done in the above-described case, the passage of intestinal contents is prevented for several days, and until the adhesions have become sufficiently firm. On the other hand, the digestive canal is not emptied too much after the operation, and thus the patient is protected against such secondary evils as the introduction of air or of septic fluids into the peritoneal cavity. By nourishing the patient with food as little fluid as possible, the flow of alimentary material along the intestine is reduced to a minimum, and the patient is less exhausted. 6. By introducing fluids directly through the large intestine, water is absorbed as under normal conditions, and the patient does not suffer from thirst. W. Johnson Smith.

LUDWIG ON THE CHEMISTRY OF LEUKÆMIA.

Professor Ludwig of Vienna having lately, at the request of Professor Bamberger, examined the blood of five leukæmic patients, has communicated the results of his analyses to the Vienna Medical Society (*Wiener Mediz. Woch.*, 1881, No. 5). In 1851, six years after the simultaneous description of the disease by Virchow and Bennett, Scherer discovered in leukæmic blood, lactic, formic, and acetic acids, hypoxanthin, and a substance of the nature of gelatine. He also found a substance falling, as he said, between albumen and gelatine. Practically, up to the present time, little change has been made on Scherer's analysis. As, however, the above-named acids and hypoxanthin have been shown to result from the decomposition of oxyhæmoglobin, Professor Ludwig, in his examination, both of the blood and of the spleens of leukæmic patients, has given little attention to them; notwithstanding, as he says, the utmost care in manipulation, in none of the five cases did he see in the blood any trace of the formation of gelatine. Suspecting, however, from the appearance of a syrup-like fluid obtained in the first case, that he had to do with a solution of peptone, he set about separating out the albumen. This he did both by Hofmeister's and by Schmidt-Mühlheim's method; and, thereafter, in all five cases, he found peptone a constant ingredient, varying much in amount according to the relation between the white and the red blood-corpuscles. Peptone—the end-product, as he defines it, of pepsin digestion, when the fluid yields absolutely no reaction of albumen—is not a constituent of normal blood; but, from his own experiments, and from those of Hofmeister, he concludes that peptone is a normal constituent of leukæmic blood.

He also examined the spleen in the above five cases. Having chopped the spleen small, he boiled it in distilled water, strained the fluid obtained, and slightly concentrated it. On cooling, the fluid thickened to a jelly, and, in all five cases, a substance closely resembling gelatine was found in large amount. In fifty normal spleens of adult persons no trace of the formation of gelatine was discovered; but, in the spleens of children, its presence is as unfailing as in those of leukæmic patients. In both these latter cases we have to deal with young hyperplastic connective tissue. 'Can it be', he asks, 'that young and old connective tissue, giving the same appearances in staining and under the microscope, show here a difference in chemical examination?' Professor Ludwig gives no details as to the presence of peptone in the spleen, but Salkowsky has shown that it exists in considerable quantity both in the spleen and in the liver of leukæmic patients.

James Anderson, M.D.

MEDIN ON EPIDEMIC CEREBRO-SPINAL MENINGITIS IN INFANTS.

Dr. Oscar Medin of Stockholm commences an elaborate paper on this subject in the *Nord. Med. Arkiv*, Band xii, 1880, by pointing out that, while there is an abundance of literature on cerebro-spinal meningitis, very little has been said regarding its occurrence in children during the first year of life; at least, as regards foundling hospitals and similar institutions. Ritter von Rittershain, in the second yearly report (1866) of the Royal Bohemian Foundling Institution in Prague (Virchow and Hirsch's *Jahresb.*, 1868), speaks of about 350 children as having died of meningitis during the year. Dr. Medin supposes that the disease was really cerebro-spinal meningitis; the author of the report, however, speaks of it

as being a form of pyæmia. He believes also that the disease described by Gee and Barlow in *St. Bartholomew's Hospital Reports* as the 'cervical opisthotonus of infants' was of the same nature.

Dr. Medin gives a detailed history of the progress of cerebro-spinal meningitis among the children in the great orphan institution in Stockholm during the thirty-five years, 1842-1876. During this time, there were two great epidemics of the disease among infants, one in 1848-51, the other in 1856. In the former, there were 156 cases and 134 deaths; in the latter, 32 cases and 24 deaths. On both occasions, most of the cases which ended in recovery occurred at the commencement of the epidemic. There were also other years in which the disease was somewhat prevalent, viz., in 1857 (17 cases), 1865 (9 cases), 1868 (9 cases), 1875 (9 cases). In several other years there were from 3 to 5 cases.

With regard to the pathological connection of cerebro-spinal meningitis with other diseases, the author points out that the only forms of disease which, from their simultaneous occurrence and their frequency, could be regarded as having an intimate relation to cerebro-spinal meningitis, were capillary bronchitis and broncho-pneumonia, especially a very malignant form of these maladies, complicated with splenitis or with spleno-peritonitis, complications rather common in the epidemic meningitis. Tuberculosis, which sometimes occurred in a truly epidemic form in the institution, prevailed at other periods, generally immediately after an epidemic of meningitis.

Most of the cases of the disease occurred in winter and spring. The author believes that this was due to the overcrowding of the institutions at this time of the year, and to defective ventilation.

The disease was most prevalent in male children. Of 255 deaths, 149 occurred in males and 106 in females. Most of the cases (154) occurred within the first three months of life. After this, the frequency diminished, because the number of children was gradually decreased by removal from the institution.

Dr. Medin regards cerebro-spinal meningitis as an infectious miasmatic disease, and points out that some cases would appear to present a contagious character. He believes that the infection is communicated to the perineural lymphatic system through the lymph-spaces of the nasal mucous membrane, which, according to the researches of Key and Retzius, are in direct communication with the air by means of apertures between the epithelial cells and the mucous membrane, and, by means of lymphatic canals, with the subarachnoid lymph-spaces at the base of the brain. Clinical and pathological observations in favour of this view are cited. The author supposes also that, in the acute pulmonary affections which coincide in frequency with cerebro-spinal meningitis, the infective material attacks the lungs in place of the perineural lymphatic system. He further observes that he has never observed transmission of the disease to a nurse or an attendant; that, among children above one year of age under care in other departments of the institution, there have been very few cases of cerebro-spinal meningitis; and that the disease was confined almost exclusively to sucklings. Hence, he is led to regard the epidemic meningitis of the children's asylum as a disease special to early infancy, and gives it the name of cerebro-spinal meningitis of infants (*meningitis cerebro-spinalis infantum*).

The symptoms and course of the disease vary in different cases. The author describes first the abortive cases, then those which ended in recovery. The cases in these two categories lasted from a day to a week; the mildest only presented fever, somnolence, and twitchings during sleep. In most of the cases there were also other symptoms, especially during sleep; such as restlessness, great heat of the head, changes in the colour of the face and in the sensibility of the body, less frequently acute cries, haggardness of the eyes, slight convulsive spasms, rigidity of the limbs and neck, strabismus, and dilatation of the pupils. In the cases which ended fatally—and these formed the immense majority—the outline of the symptoms is thus sketched by the author.

The outbreak of the disease is often preceded by cough. Most frequently, the child falls ill during the night, with restlessness, fever, heat of head, occasionally vomiting; it frequently becomes somnolent, refuses the breast, and has startings during sleep. This state continues from one to two days, sometimes more, with remissions and exacerbations, the latter generally occurring at night. Symptoms of a more severe character then appear; intense fever with burning heat, change of colour in the face, prostration, drowsiness, acute cries with convulsive movements of the limbs; the fontanelle is often bulged out, the face deprived of expression, the eyes half-closed or wide open, the pupils most frequently contracted; there is transient convergent squint, and slight twitchings of the face, sometimes accompanied with contractions, are observed. Periodical contractions of the muscles of the trunk and limbs are a frequent symptom. The skin is almost always hyperæsthetic, sometimes the seat of eruptions. The breathing is frequently abnormal: sometimes superficial and silent, sometimes forced, irregular, or interrupted by sighs. The abdomen is often tympanic; the stools are often loose and abnormal, and the urine is frequently albuminous. Sometimes there are remissions of all the symptoms for several hours or even a whole day; cases having a slow course may assume the aspect of intermittent fever. Not unfrequently the conditions which have just been described are followed by a state of torpor, and the child dies on the second, third, or fourth day of the disease. Sometimes much more severe symptoms are developed at once, and may appear immediately after the prodromal stage: the eyes are fixed and staring, there are spasmodic contractions of the ocular muscles, frothing at the mouth, convulsions, violent contractions, opisthotonus, great hyperæsthesia, sometimes incessant convulsions, lasting several hours or even a day; the pupils are are always dilated during the convulsive paroxysms. The skin is often dry, wrinkled, of a dirty grey colour, frequently icteric. Even at this period remissions sometimes occur. In this form, the duration of the disease up to the time of death does not generally exceed one or two days.

Dr. Medin gives examples of the differences which may be presented in the course of the disease. In one case a child died in less than twelve hours; but the cerebellum and medulla oblongata had in this time become covered with a thick purulent exudation: in another case, sixteen hours of illness were sufficient to put an end to life. As a contrast, a case is related in which the illness lasted four weeks. This case presented very characteristic remissions and exacerbations of the fever and of the other symptoms, the exacerbations almost always occurring at night. Cases are also recorded which were

unattended by any symptom on the part of the nervous system. In one, the only symptoms detected during life were those of a pulmonary affection, but the necropsy showed that meningitis had been the chief cause of death; in another, the only diagnosis that could be made was that of chronic entero-colitis with general atrophy, but the *post mortem* examination revealed the presence of meningitis. The author adds that cases of this kind are rather frequent.

Dr. Medin then passes in review the more important symptoms. He believes that the prodromal stage, if it exist, is generally short; in one case at least, it was of only two days' duration. The child generally falls ill towards the evening or during the night. The modifications presented by the skin consist of variations in the colour of the face, which, generally pale, sometimes suddenly becomes red; and eruptions such as transient spotted, striated, or diffuse redness of the skin, petechiæ, ecchymoses, or erysipelas; in some cases, there is a dirty or a yellowish grey discoloration of the skin, and rather frequently jaundice.

Hyperæsthesia, or, to speak more correctly, hyperalgesia, is one of the most common symptoms. In intimate connection with this are the frequent acute cries, accompanied by startings of the whole body. The author points out the possibility of a correlation between the hyperæsthesia and the agglomerations of exudation on the posterior aspect of the spinal cord. It is rarely that the opposite condition—complete anæsthesia and apathy—is presented. In this case, no means are capable of arousing the infant. Disturbance of motor power has been a symptom in almost all the cases which have come under Dr. Medin's notice. The most characteristic symptom is the contraction of the muscles of the limbs and trunk, occurring in paroxysms or periodically; spasmodic contractions of the muscles of the face and of the eyeball are very common. The most common symptom of all consists in twichings and contractions of the muscles of the limbs; convulsions are rather frequent, generally occurring towards the end of the illness. Transitory convergent squint is also a very common symptom. The disturbances on the part of the involuntary muscles observed were: difficulty of deglutition (38 cases), irregular breathing (20 cases), hiccough (3 cases), sighing (4 cases), convulsions interrupted by laughter (1 case), intermittent pulse (4 cases). The pupils are most frequently contracted; from time to time, they are sometimes dilated, sometimes contracted; in some cases, they are of different sizes. The disturbances of motility must be ranged among the hypercinesiæ, and, like the hyperæsthesia, proceed from irritation of the nervous system.

A common and probably characteristic symptom is somnolence. As regards the fever, the variations of temperature are very irregular: this is shown by the charts which accompany the paper. The vomitings are violent, and are independent of the food taken. The swelling of the abdomen observed in many cases was no doubt due to a simultaneous affection of the peritoneum.

The pathological appearances vary, it is true, but they are constant in one respect: there is always inflammation of a more or less considerable extent of the delicate meninges, the limiting tissue of the cerebral ventricles, and the sheaths of the nerves. A certain degree of emaciation, sometimes atrophy, is frequently met with; and the skin presents the changes which have been already mentioned.

(*To be continued.*)

SHAW ON INTESTINAL LESIONS IN THE INSANE.

IN this paper, which appears in the *St. Bartholomew's Hospital Reports* for 1880, attention is drawn to the great frequency of a peculiar ulceration of the intestinal mucous membrane in chronic insanity. The ulcers are situated chiefly in the colon and jejunum; they do not resemble those of enteric fever; indeed, Dr. Claye Shaw, has never seen them in the lower part of the ileum; the patches are sometimes so extensive as to resemble a honeycomb network. The edges are usually slightly raised, and perhaps reddened, but at other times the ulcers are more like punchings-out of the mucous membrane, and they often contain a little yellowish loose gelatinous material. An earlier stage of the degeneration is sometimes indicated by patches of redness and submucous ecchymoses. These appearances are formed chiefly in those cases of mental paralytic disorder which exhibit during their last stages an intractable diarrhœa, attended with great fœtor, and defying all remedies. This diarrhœa and ulceration are certainly not owing to the action of purgative medicines, for they are rarely seen in epileptics, who take more aperients than any other class of patients in asylums. Where ulcerations are seen in the large bowel of an epileptic, they are usually evidently due to the irritation of hard fæcal accumulations.

Dr. Shaw gives good reasons for his belief that the intestinal irritation which is generally present in the later stages of paralytic insanity, and which often leads to the ulceration now described, is due to the presence in the bowel of undigested or imperfectly digested food. The general nervous disease from which the patient is suffering interferes with the harmony in the time-rate of muscular contractions of the stomach and other parts of the alimentary canal; the result is that food is not allowed to rest a sufficient time in that particular part where certain of its constituents should be assimilated, or put into a state for assimilation, but, being passed on too rapidly, acts as an irritant to those parts with which it comes in contact. Additional elements in this defective digestion are doubtless supplied by the imperfect action of the various secreting glands of the alimentary tract, owing to impairment (paralytic or irritative) of their nerve-supply. The ulceration may also be regarded as partly due to the general impairment of nutrition and disintegration of tissue which occurs in these cases. Notes are given of the *post mortem* records of nine cases, in which the intestinal lesions described above were observed.

Attention is drawn by the author to many facts which illustrate the influence of the nervous system upon the digestive process, and *vice versâ*. It is suggested that the intense craving for food which is seen in general paralysis of the insane is due to the abnormal rapidity with which the stomach forces the food onwards; but for this increased muscular activity, the stomach could not accommodate the enormous quantity of food which is taken. We are also reminded of the large amount of insanity which is caused by the irregular ingestion of food (solid or fluid); the indigestion thus brought about leads inevitably to impaired nutrition of the body generally, and of the nervous system in particular.

C. S. W. COBBOLD, M.D.

ECKER ON PROBABLE RUDIMENTS OF EMBRYONIC FORMS IN THE COCCYGEAL REGION.

This work of Professor Ecker on the vortex coccygeus, the glabella coccygea, and the foveola coccygea (*Archiv für Anthrop.*, Band xii, 1880), has already given rise to several publications, showing the interest naturally taken in the subject. Professor Ecker was led to observe the appearances, to which he has given the above names, in the course of his studies on abnormal hairiness in man. It is known from human development that the embryonic hairs, in the third or fourth month, exist as conical processes of the rete Malpighii, projecting obliquely into the cutis; and thus the hair, developing, shows a regular and definite arrangement. 'Hair-streams' and 'hair-vortices' are readily recognised; the latter generally divergent, very rarely convergent. A convergent hair-vortex, termed by Professor Ecker 'vortex coccygeus', is invariably present in the human fœtus of the fourth or fifth month in the coccygeal region; and frequently the hairs in the line of the back are longer than the rest, and form, in the centre of the vortex, a small 'hair-tail', which lies occasionally somewhat over the end of the coccyx—usually coincides with it. Above this hair-vortex, specially distinct in the young fœtus, is a bald hairless spot, generally in the region of the last sacral or first coccygeal vertebra, which Ecker terms 'glabella coccygea'; and frequently the lower part of the glabella forms a slight groove, or pit, 'foveola coccygea'. This groove, or pit, has been already described in infants and adults by Luschka and Hyrtl, under the name, 'foramen cæcum recto-anale'; and Mr. Lawson Tait (*Nature*, Aug. 22, 1878, p. 481) gives the statistics of its occurrence in adult women, which show that, in 23 per cent., it is distinctly developed, in 22 per cent. indistinctly, and in 55 per cent. there is no trace of it. Dr. Schüll of Illenau found that, among 88 men, it was well marked in 5, and appeared in 16 cases on separating the nates.

In attempting to follow the development of these appearances, it must be remembered that Costl and Ecker, some time since, described and figured the tail-like appendage possessed by the human embryo of the first month, running out into a fine, abruptly ending thread. This appendage gradually shortens, till at last only a slight 'coccygeal knob' remains, and it finally is also grown over. Professor Ecker shows that the coccyx was originally straight, and that the extremity is connected with the skin by the ligamentum caudale of Luschka. Eschricht and Voigt have already shown that convergent hair-vortices occur in those spots where, at the date of the development of hair, the skin is, or has been, stretched. Professor Ecker believes, therefore, that the above-mentioned coccygeal knob is the cause of the vertex coccygeus. The explanation of the glabella coccygea is less certain. It is hairless, thin, and vascular; and Professor Ecker regards it as the last closed part of the vertebral canal, a sort of inferior fontanelle. The foveola coccygea appears latest of all, and frequently persists. It is explained by the retraction of the skin following the curvature of the originally straight coccyx, the tip of which is firmly attached to the skin by the ligamentum caudale.

James Anderson, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. Banford, Gerald. — On Aconite in Remittent Fever. (*Practitioner*, March 1881, p. 186.)
2. Macewan, David.—On Benzoate of Soda in the Treatment of Acute Rheumatism. (*Brit. Med. Jour.*, March 1881, p. 336.)
3. Barnes, J. J. F.—On Conium in Bronchial Catarrh. (*Brit. Med. Jour.*, March 1881, p. 338.)
4. James, Prosser.—On Salicylate of Cinchonidia and of Quinia as Substitutes for Salicylate of Quinine. (*Lancet*, March 1881, p. 402.)
5. Tomkins, Henry. — On the Antipyretic Treatment of Typhoid Fever by Salicylate of Soda. (*Lancet*, March 1881, pp. 409, 455.)
6. Latham.—On Salicylic Acid in Diabetes. (*Lancet*, Feb. 1881, p. 215.)
7. Mortimer-Granville. — On the Treatment of Pain by Mechanical Vibrations.
8. Hamilton, A. M. L.—On Phosphate of Silver in Organic Nerve-Disease. (*Lancet*, Feb. 1881, p. 290.)
9. Hewan, Archibald.—On the Salicylate of Quinia in Neuralgia. (*Lancet*, Feb. 1881, p. 319.)
10. Atkinson, F. P.—On Hydrocyanic Acid in controlling Cerebral Circulation. (*Practitioner*, Feb. 1881, p. 84.)
11. Coupland.—On a Case of Hysterical Vomiting. (*Lancet*, 1881, p. 291.)
12. Sutherland, H.—On a Case of Chronic Vomiting. (*Brit. Med. Jour.*, Feb. 1881, p. 274.)
13. O'Connor, Bernard.—On the Treatment of Enuresis in Young Children. (*Lancet*, Feb. 1881, p. 318.)
14. Sansom, E. A.—On a newMethod of Supplementary Alimentation. (*Lancet*, Feb. 1881, pp. 288, 322.)
15. Potain.—On Milk Diet and Diseased Heart. (*Bull. de Thérap.*, Jan. 1881.)
16. Ferrand. — On Therapeutic Indications in the Vomiting of Phthisis. (*L'Union Méd.*)
17. Labbé and Dujardin-Beaumetz.—On the Treatment of Neuralgia by Salicylate of Soda. (*Revue de Thérap.*, p. 154.)
18. Dujardin-Beaumetz.—On Resorcin for External Application. (*L'Union Méd.*, April 2.)
19. Hallopeau.—On the Treatment of Typhoid Fever by Calomel, Salicylate of Soda, and Sulphate of Quinine. (*L'Union Méd.*, March 21.)
20. Gueneau de Mussy, Noel. — The Seeds of Psyllium Plantago as a Remedy for Constipation. (*Revue de Thérap.*, p. 154.)
21. Gibert.—On Transfusion of Blood in a Case of Acute Typhoid Fever, complicated with Intestinal Hæmorrhage. (*Bull. de l'Acad. de Méd.*, March 25, 1881.)
22. Voss and Sperk.—On the Treatment of Psoriasis by Baths of Sublimate. (*Bull. Gén. de Thérap.*, March 30, 1881.)
23. Freudenberger.—On the Therapeutic Value of Conchinin. (*Deutsch. Arch. für Klin. Med.*, Band xxvi.)
24. Beck. — On Apomorphia as an Expectorant. (*Deutsch. Med. Woch.*, Feb. 1881.)
25. Weise.—On the Treatment of Diphtheria. (*Berl. Klin. Woch.*, 1881, No. 4.)
26. Tacke.—On Atropia as a more effectual remedy than Extract of Ergot in Menorrhagia and Hæmoptysis. (*Berl. Klin. Woch.*, No. 6, 1881.)

1. *Banford on Aconite in Remittent Fever.*—In the *Practitioner*, March 1881, p. 186, Dr. Gerald Banford records the good results he finds from the use of aconite in remittent fevers. 1. It reduces the temperature; 2. It reduces the rapidity of the pulse, and makes it full and strong; 3. It cleans the tongue, and restores the digestive functions; 4. It induces sleep; 5. It increases the quantity of urine, and

seems to have a direct effect in removing the symptomatic congestion of the kidneys; 6. It promotes perspiration. Dr. Banford's experience of Warburg's tincture in remittent fever is not satisfactory, it having proved useless in his hands.

2. *Macewan on Benzoate of Soda in the Treatment of Acute Rheumatism.*—In the *Brit. Med. Jour.*, March 1881, p. 336, Dr. David Macewan reports the results of a trial of benzoate of soda in a series of cases of acute rheumatism. Five cases are given, in all of which the symptoms, which in several of the cases were urgent, passed off in periods varying from three to seven days from the commencement of the treatment, in none were cardiac complications set up; and the convalescence appeared more rapid than in those cases where salicylate of soda was the drug used. Benzoate has the advantage over salicylate of soda, of causing neither nausea nor depression, nor any unpleasant cerebral symptoms. The dose is fifteen to twenty grains in mixture every two to three hours, being diminished after the symptoms have disappeared.

3. *Barnes on Conium in Bronchial Catarrh.*—Mr. J. J. Frederick Barnes (*Brit. Med. Jour.*, March 1881, p. 338) states that he has entirely relieved all but two of fifty cases of bronchial catarrh, after forty-eight hours' treatment, by the use of succus conii. The dose is fifteen to twenty minims every two to four hours, according to age. The cases were simple tracheo-bronchial irritation, where pyrexia and general malaise had not yet set in. Mr. Barnes suggests that the conium acts through its sedative action on the nervous centres, in connection with the respiratory tract, of one of its derivatives, methylconia.

4. *James on Salicylate of Cinchonidia and of Quinia as a Substitute for Salicylate of Quinine.*—Since Dr. Hewan advocated the use of salicylate of quinine in neuralgia and rheumatic gout, many observers have confirmed his statements, but the great expense of the drug is in many cases prohibitive. Dr. Prosser James, in the *Lancet*, March 1881, p. 402, asserts that, in the salicylate of cinchonidia and quinia we have an equally efficacious and much cheaper drug. It can be administered either as pills, or compressed into tablets, as done by Wyeth in the case of many other drugs.

5. *Tomkins on the Antipyretic Treatment of Typhoid Fever by Salicylate of Soda.*—In an exhaustive paper in the *Lancet*, March 1881, pp. 409, 455, Dr. Henry Tomkins reconsiders the value of salicylate of soda in the treatment of typhoid fever. Forty-six cases of marked severity, where the ordinary treatment held out but faint hopes of recovery, were selected; of these, thirty-two recovered, five dying soon after admission, and four succumbing to intestinal hæmorrhage and pulmonary complication. A point deserving of notice is that, in a large proportion of the fatal cases, the temperature resisted the antipyretic action of the salicylate of soda, pushed to extreme doses; and Dr. Tomkins finds that, when the full action of the salicylate is not obtained within twelve hours, the prognosis is most unfavourable, and its further use ought not to be persisted in. Dr. Tomkins' mode of administering the drug is to give twenty grains every two hours when the temperature in the axilla is continuously over 102 deg. Six doses generally reduce the temperature two to three degrees; if not, the same dose is to be continued a few more hours. Ten grains are now given every two to three hours, the dose being increased through the day if there be much tendency to exacerbation during the night. In periods varying from three to ten days, the temperature became fairly normal. Dr. Tomkins believes that, in the salicylate, we have a means of reducing the temperature as certainly, and far more agreeably to all parties concerned, than the cold bath. Often alcohol must be given with the salicylate; and, in renal or pulmonary complications, the drug is contra-indicated. The anæmia, noticed by Dr. Greenhow after the use of the drug, has not been observed in Dr. Tomkins's cases.

6. *Latham on Salicylic Acid in Diabetes.*—Dr. P. W. Latham, in the *Lancet*, Feb. 1881, p. 215, enters into the chemical changes that result in cases of diabetes from the administration of salicylic acid. It was given to six patients with variable success, but still with such results as seemed to warrant further trials. In one case, the sugar entirely disappeared from the urine.

7. *Mortimer-Granville on the Treatment of Pain by Mechanical Vibrations.*—In the *Lancet*, Feb. 1881, p. 286, Dr. J. Mortimer-Granville describes the experiments he has been conducting since 1862, in order to relieve neuralgic pains by rapidly striking the nerve supplying the affected part. Having now perfected his 'percutier', through the assistance of Mr. Streeter of Bond Street, Dr. Mortimer-Granville finds that, in a great majority of cases of tic, he can rapidly and effectually remove the pain. He would have preferred testing the true value of his observations by further experience, but M. Boudet of Paris having, in *Le Progrès Méd.* of Feb. 5th, anticipated Dr. Mortimer-Granville by publishing the results of his own observations, the latter gentleman felt it due to himself to place on record at once the results which he had for several years past been in the habit of demonstrating before Drs. Brown-Séquard, Ball, Oscar Jennings of Paris, and Ringer and Gowers of London. He thus concludes a very suggestive paper. 'I would venture to predict that it will be found that nerve-action, both normal and abnormal, consists of vibrations, and that other mechanical vibrations set up and propagated by any mechanical apparatus or appliance, acting from without and propagated through the tissues, may be made to modify the internal movements; that normal vibrations consist of movements of the constituent parts of the nerve within its sheath, and that, when these become inordinate or disorderly, they are propagated to the sheath itself, and then become painful; that, under this last-mentioned condition, the wave of vibration is likely to be propagated along the sheath of the nerve, and through it to the sheaths of other nerves with which the first in order of disturbance may be mechanically related, either by direct contact, or through intervening tissues; that the action of irritants applied to the skin is mechanical, producing contraction of the tissues, and either fast gripping and then relaxing the terminal twigs of the nerves, thus throwing them into mechanical vibrations, or so changing the constitution of the bed in which these terminal twigs lie, as to oppose a mechanical obstruction to their natural vibration, and thereby convert it into a morbid rhythm. This, indeed, has been demonstrated by Dr. Ringer in connection with the *modus operandi* of blisters. These may be set down as crude speculations, but they are the results to which experiment and common-place reasoning point, and they are in harmony with a view of the phenomena of nerve-action and pain which the enquiry I am pursuing forces upon me, and by which nearly all the wonders

of the hysterical school of medical philosophy may be explained. I cannot claim to have discovered a "cure" for neuralgia, nor even a certain method of treatment for its relief; but, as the facts have been prematurely published, I think the method should be tried.'

8. *Hamilton on Phosphate of Silver in Organic Nerve-Diseases.* — Dr. Allan McLane Hamilton, after an experience of two years, brings forward in the *Lancet*, Feb. 1881, p. 290, this new preparation of silver as valuable in acute myelitis, with disturbance of the bladder and rectum, and also in cases of spinal sclerosis, in seven cases of which the pains have become less and the locomotive power greater. Six cases of inveterate epilepsy have also been relieved under Dr. Hamilton's care.

9. *Hewan on the Salicylate of Quinine in Neuralgia.*—Dr. Archibald Hewan, in the *Lancet*, Feb. 1881, p. 319, confirms the value he previously attached to the salicylate of quinine in cases of rheumatism and rheumatic gout. [*Vide* London Medical Record, May 1880, p. 187.] Dr. Hewan now asserts that, in neuralgia, six-grain doses of the salicylate possess a masterly power.

10. *Atkinson on the use of Hydrocyanic Acid in controlling Cerebral Circulation.*—In the *Practitioner*, Feb. 1881, p. 84, Dr. F. P. Atkinson, in a paper entitled Vasomotor Influence in the production of certain Functional Disorders, with some remarks as to treatment, refers to the sedative action exerted by dilute hydrocyanic acid on the brain, spinal cord, and heart. [Dr. Kenneth Macleod published, in the *Med. Times and Gaz.*, March 1863, p. 262, a series of cases showing the wonderful power which five-minim doses of Scheele's acid have in calming cerebral excitement in cases of mania. The advantages of the drug, in comparison with other calmatives and hypnotics, are: 1. The rapidity, certainty, and simplicity of its effects; 2. Its manageability and freedom from any cumulative property; 3. The absence of any disagreeable, concomitant, or consequent physical disturbance, which most other analogous modes of remedial treatment possess; 4. Its small bulk, want of colour, and miscibility; 5. Its want of repulsive smell and taste—a very great virtue with the insane, who are very apt to rebel against medicine. Dr. Macleod recommends five minims, to be repeated every quatrer of an hour if need be; or five minims mixed with twenty-five of water may be injected subcutaneously, or administered as an inhalation.—*Rep.*]

11. *Coupland on the Treatment of a Case of Hysterical Vomiting.*— A case of hysterical vomiting, lasting eight months, is reported by Dr. Coupland in the *Lancet*, Feb. 1881, p. 291. The patient was a domestic servant, aged 24, unmarried. For seven months before coming under observation she had vomited at intervals, with continuous pain at the pit of the stomach, periodically worse every three weeks. Menstruation was regular, and there was no uterine displacement. She was habitually constipated. A variety of medicines were employed without avail, as also nutritive enemata, but still the vomiting continued; and, therefore, it was decided to push solid food, leaving off hypodermic injections of morphia that had been previously given. The result was most satisfactory, the patient leaving the hospital convalescent.

12. *Sutherland on Chronic Vomiting, in which no Food, excepting Koumiss, was taken for Sixteen Months.*—In the *Brit. Med. Journ.*, Feb. 1881, p. 274, Dr. H. Sutherland gives the history of a patient, aged 24, who had lived for sixteen months on koumiss alone, and in whom all the known methods of treatment had failed to enable the stomach to retain other food. The case gave rise to an interesting and instructive discussion before the Clinical Society. Dr. Sutherland, in reply to various observations, stated that he did not consider her case to be due to hysteria. She was bad tempered at home, and somewhat suicidally inclined. He had not applied caustic to the os uteri, as some suggested, since the patient was oversensitive to examination, nor had he blistered the epigastrium. Two pints of Chapman and Co.'s koumiss were taken daily.

13. *O'Connor on the Treatment of Enuresis in Children.*—Dr. Bernard O'Connor testifies, in the *Lancet*, Feb. 1881, p. 318, to the value of withholding all flesh meat in enuresis, giving three pints of fresh cow's milk, besides ordinary meals. A hot bath night and morning, and warming the bed previous to its being occupied, are valuable aids, the child being taught to 'call' the nurse at stated intervals. In nine out of ten cases, Dr. O'Connor has succeeded in perfectly curing without the aid of medicines. [In the London Medical Record, June 1879, p. 219, Dr. M'Intyre is referred to as having, in the *Lancet*, May 1878, p. 665, first drawn attention to the restriction from meat-diet as being very effectual in curing a number of obstinate cases of enuresis.—*Rep.*]

14. *Sansom on a New Method of Supplementary Alimentation.*—In the *Lancet*, Feb. 1881, pp. 288, 322, Dr. A. E. Sansom brings before the notice of the profession the value of defribinated blood as a nutritive agent, in the form of enemata. Three or four ounces injected over night leave no traces in the dejecta next morning. In one case, where death followed in the course of phthisis, eight hours subsequently to an injection, it was found that the large intestine was very evenly coated with thickened blood for a distance of three feet, showing that enemata are carried up the rectum by a process of retrograde peristalsis. It is found that a grain and a half of chloral in each ounce of blood prevents any offensive odour in the dejecta. The blood may now be obtained in a desiccated form, as it is not always easy to obtain, at a moment's notice, fresh defibrinated blood. Messrs. Savory and Moore, among others, are prepared to supply it. [In the London Medical Record, 1878, p. 504, Dr. Andrew H. Smith's report to the Therapeutical Society of New York, with experiments and cases, is given in detail. —*Rep.*] Richard Neale, M.D.

15. *Potain on Milk-Diet and Diseased Heart.*— Professor Potain has recently published an interesting memoir on this subject, which he communicated to the Medical Congress at Rheims. His conclusions are that milk-diet is peculiarly efficacious in secondary cardiac hypertrophies, simply having a renal or a gastric origin; that this diet modifies in one case the state of the kidney, and in the other that of the stomach, especially in the sense that it affords to these organs complete repose; and that, in order to be really efficacious, it should be absolute or more or less prolonged; that it may usefully intervene in case of simple reflex palpitations when the reflex disturbance is gastric; that its pyretic action may be utilised in cases of dropsy, and perhaps when the dropsy is the consequence of a secondary renal disorder, or of intercurrent inflammation.

16. *Ferrand on the Treatment of Vomiting in*

Phthisical Patients.—M. Ferrand, physician to the Hospital Laennec, sums up as follows, in *L'Union Médicale*, the principal indications presented in the vomitings of consumptive patients. The forms of vomiting are:—1. the mechanical vomiting resulting from the excitation of the respiratory nerves, which is sometimes combined with a certain degree of pharyngeal or gastric irritation; 2. gastric vomiting properly so-called; central and bulbar vomiting. These varieties of vomiting differ, not only in their mechanism, but also in their period of appearance, and in the nature of the vomited matters, etc. The mechanical vomiting of phthisical persons, which may be called direct vomiting, occurs at the outset of the disease. It brings up substances which are in a large measure alimentary. The first indication in this case is to calm the cough. This however, is more easily said than done. Emollients, alkaline, and soothing gargles should be employed. When the irritation of the pharynx is deep-seated, modifying astringents (alum, tannin, confection of roses, etc.) should be resorted to, and even such remedies as tincture of iodine, nitrate of silver, or ammonia. What are most often employed are the narcotics, the fumes of belladonna, datura, and then anæsthetics and antispasmodics. In this contingency, M. Woillez recommends touching the pharynx with a solution containing one-sixth of bromide of potassium. Gastric vomiting is the most common of digestive disorders in phthisis. It occurs in three-fifths of patients, according to Andral, and in four-fifths, according to Louis. It is the vomiting of the middle period of the disease. The matters are not purely alimentary; they are substances more or less changed by the digestion and fluid. They include also mucus and bile. There are four varieties of gastric vomiting. 1. Vomiting from apepsia. For this, bitter and tonic digestives are to be employed, or, in case of need, an emetic; in default of the latter, chloral, and chloroform in preference to ether; and diastase, because of its peptic qualities, may render real service in these cases. 2. Vomiting from 'hypercrinia', observed especially in cachectic patients, is combated by absorbents (magnesia, charcoal) or astringent powders (rhatany, calumba). Powdered opium renders great service in these conditions. 3. The vomiting from convulsive gastralgia demands the administration of narcotics (opium, chloral, ether). The application of ether-spray to the epigastric region and the back has given good results. 4. Vomiting by gastric irritation. Here the diet must be regulated, the meals must be given at fixed times, and milk-diet prescribed. Alkaline remedies and iodide of potassium in small doses should be given. Opiate blisters should be applied, and, in case of failure, revulsive agents (tincture of iodine and blisters) should be used without fear. Central or bulbar vomiting may occur at the outset of the tuberculosis, but usually at an advanced stage. It may be symptomatic of an encephalic irritation, or the effect of bulbar anæmia. The vomited matters consist mostly of mucus and bile. The therapeutic agents at the disposal of the physician are first chloral, then chloroform, opium, and morphia, as well as bromide of potassium, in doses of 1 to 2 grammes (15 to 30 grains) at meal-times.

17. *Labbé and Dujardin-Beaumetz on the Treatment of Neuralgia by Salicylate of Soda.*—M. Labbé has used salicylate of soda in the treatment of neuralgia (*Rev. de Thérapeutique*), and has obtained good results in cases of suborbital neuralgia, and of sciatica, which had resisted sulphate of quinine. One of these patients was diabetic, but M. Labbé believes that glycosuria does not present any counter-indication for the use of this drug. Since that time M. Labbé has not been so successful with the same treatment; and in the case of a young girl who had taken the salicylate without any result, he afterwards found that sulphate of quinine brought on a notable improvement. He is of opinion that salicylate of soda is only successful in rheumatic persons. He prescribes it in doses of 8 grammes (120 grains) for the first two days, and 4 grammes on the third. It should be taken before meals twice or thrice during the day, and a little Vichy water should be subsequently drunk. M. Dujardin-Beaumetz remarks that the treatment of neuralgia by salicylate of soda is a well-known method. Germain Sée, and Descroizelles, have recorded excellent examples of it. In certain cases, as has been demonstrated by Luys, the acute pains of ataxic patients have been relieved by this method; however, it is not yet generalised, and the treatment of neuralgia by salicylate of soda is still an exceptional fact. The reason is that, in the first place, this medication is uncertain; and if it is sometimes successful, it fails utterly in many more numerous cases; and, from this point of view, salicylate of soda is greatly inferior to aconitine. The second reason is, that sometimes the use of large doses of salicylate of soda produces very bad internal results. It has not been easy to explain why salicylate of soda has so injurious an action in certain persons, but it is none the less true that this drug, in doses of eight or ten drachms, is sometimes found to produce a very marked depression of the circulation, bringing on a notable lowering of the cardiac pulsations.

18. *Dujardin-Beaumetz on Resorcin for External Application.*—M. Dujardin-Beaumetz has made use of resorcin for external application in the treatment of the worst kind of wounds, as syphilitic ulcerations and vaginitis, and the results which he has obtained have been most satisfactory. He has been less satisfied with the action of resorcin in gastric catarrh. He has, however, utilised this substance as an internal application in two gramme doses daily, though without any decided result. All these trials, however, are only at their commencement, and the complete history of these researches will soon be published by one of M. Dujardin-Beaumetz's pupils, M. Hippocrate Callias.

19. *Hallopeau on the Treatment of Typhoid Fever.*—Dr. Hallopeau (*L'Union Médical*, March 21) has been making a study of the treatment of typhoid fever by calomel, salicylate of soda, and sulphate of quinine. He has communicated his results to the Societie Médicale des Hôpitaux, and his conclusions are as follows. 1. Salicylate of soda and sulphate of quinine generally exercise an appreciable action over the temperature of typhoid fever patients. 2. The action of salicylate of soda is not habitually continuous; at the end of two or three days, even when fresh doses are administered, new rises of the thermometrical curve are observed. As a rule, however, they only attain the initial figures in a temporary manner, and the centre of the thermic oscillations generally remains depressed. 3. Two grammes (31 grains) of salicylate of soda are, as a rule, sufficient to produce an antipyretic action. 4. In doses of 4 grammes and upwards, this drug seems capable of itself producing symptoms, and especially of increasing the dyspnœa, augmenting pulmonary congestion, favouring the tendency to hæmorrhage, and sometimes

inducing delirium and restlessness. 5. These accidents may be avoided if the salicylate of soda be given in doses of two grammes only, if it be not prescribed for more than three days successively, and if contra-indications be duly observed. 6. These contra-indications are especially thoracic complications, serious cerebral symptoms, and hæmorrhage. 7. By prescribing sulphate of quinine and salicylate of soda alternately, the centre of the thermic oscillations is most frequently maintained at a comparatively low figure. The pernicious effects of excessive temperature are thus avoided, and it would seem at the same time that a favourable action is exerted over the course of the disease. In this way, an equally powerful control is obtained over the temperature as with cold baths, without exposing the patients to the same accidents. 8. The antipyretic action of sulphate of quinine is produced even when that of salicylate of soda seem to be exhausted, and *vice versâ*. The therapeutic effect of one is added to that of the other, but not their toxic effects. 9. Cold lotions, cold applications to the abdomen, and cold enemata, may be advantageously employed as accessories at the same time as the antipyretics. 10. In cases when hyperpyrexia persists, notwithstanding this treatment, the daily doses of sulphate of quinine may be increased to one and a half, two, or even three grammes. Four grammes of salicylate of soda may in like manner be given, provided that the dose be repeated not oftener than every second or third day, and that it be ascertained that the medicine is being eliminated by the urine.

20. *Gueneau de Mussy on the Seeds of Psyllium Plantago as a Remedy for Constipation.*—Trousseau (*Revue de Thérap.*, p. 154) had recommended the substitution of linseed in constipation for mustard seed, which is not always harmless. Dr. Noel Gueneau de Mussy followed this practice, when a Spanish lady pointed out to him the use of a grain which she found very useful, and which she called *sarragola*. On examination, this was found to be the seeds of the *plantago psyllium*, which Dr. Gueneau de Mussy has used with good effect ever since. Psyllium is a kind of plantain commonly called fleawort, on account of the appearance of its seeds, which are very small and very mucilaginous. A table-spoonful of these seeds should be taken in a wine glassful of water before dinner. Sometimes this prescription must be alternated with more powerful laxatives, as aloes and rhubarb. As it is very useful to be able to vary the means at disposal for the relief of constipation, Dr. Gueneau de Mussy has thought it useful to bring this special one before the notice of the profession generally.

21. *Gibert on Transfusion of Blood in a case of Acute Typhoid Fever Complicated with Intestinal Hæmorrhage.*—This case (*Bull. de l'Acad. de Méd.*, March 29, 1881) was that of a patient attacked by typhoid fever, in the first instance without any special characteristics, which, at the end of thirty-one days, suddenly manifested peculiar symptoms ; first, a state of syncope, followed shortly after by great restlessness, at the moment when a small bloody evacuation appeared for the first time. In a fit of great excitement, the patient, having got out of bed, and in the midst of the struggle to put him into bed again, evacuated *per anum* about 1,500 grammes of coagulated blood, extremely fetid, evidently proceeding from a mesenteric artery. Delirium supervened, as well as such a state of weakness that, believing death to be near, Dr. Gibert attempted during the course of the night transfusion of the blood, an operation in which, in consequence of operative difficulties, he thought he could only inject from 25 to 30 grammes of blood. The general condition being rather more satisfactory, a second injection of 90 grammes of blood was performed the following morning. A sudden and lasting improvement showed itself immediately, of which the brain was the first to feel its effects; the heart beat normally, and the first sound became perceptible. Cardiac impulsion was felt, and the patient, aroused from his death-struggle, was able to take nourishment. Convalescence soon set in, and the cure is at the present time complete. M. Gibert is uncertain whether this case of transfusion is exceptional and without value, from the point of view of general pathology, or whether it is a case which should guide the physician. Whenever the typhoid patient, especially when he has lost much blood, is in an organic incapability of living if the blood is not renewed, which is often the case—if at this moment the physician intervene by transfusion, he will more often than has been hitherto believed have the chance of saving life.

22. *Voss and Sperk on the Treatment of Psoriasis by Baths of Sublimate.*—Having to deal with a case of obstinate psoriasis which defied all their efforts for four months, Dr. Voss and Dr. Sperk (*Gaz. Med. Chir. de Pesth*) hit upon the plan of trying baths of sublimate only. The result may be truly designated as wonderful. After a series of fourteen baths, the skin lost its reddish colour, the epidermis desquamated in large lamellæ, the teguments finally, which were thickened and infiltrated, became supple and elastic. However, during the course of treatment, there were fresh eruptions, but the new patches were less injected, and covered with thinner epidermic scales. Scratching did not bring on any sanguinous exudation. Forty-six baths completed the cure. So remarkable and unexpected a result encouraged Dr. Voss to persevere in the same path ; four other cases of inveterate psoriasis treated in the same way obtained a good result in a comparatively short time. The first patient took thirty-two baths, the second forty, and the third forty-eight, and at the time when this report was written, a fourth patient had greatly improved, but was not completely cured. As far as possible the baths were given daily; the water was at a temperature of 27-29 deg., and the patient was required to remain in them from thirty to forty minutes. Dr. Voss has never observed the symptoms which are easily caused by mercurial preparations, such as salivation, swelling of the gums, etc. The advantages of this new treatment may be described under the three heads of (1) rapidity, (2) facility of administration; as baths require but a very short time, and the patient is not obliged to interrupt his daily occupations, and (3) cleanliness. The patient is also able to dispense with topical applications of all sorts, which generally exhale a more or less unpleasant odour.

23. *Freudenberger on the Therapeutic Value of Conchinin.*—Hesse's conchinin (identical with Van Heyningen's betaquinine and Pasteur's quinidine) was administered to a number of patients under Dr. Ziemssen's care at Munich. It proved very effectual as an antipyretic. Thirty grains of conchinin were administered on one hundred occasions to fifty-four patients suffering from enteric fever; in 71 per cent. of the cases the temperature fell 2 deg. Cent. (3.6 Fahr.); in nine of the cases the fall amounted to 3 deg. Cent. (5.4 Fahr.). The defervescence always set in within an hour of the administration of

the dose. When quinine was given alternately with conchinin, no decided difference of antipyretic action could be made out between the two alkaloids. The defervescence produced by 30 grains of conchinin was equal to that produced by from 90 to 150 grains of sodic salicylate; the latter drug, however, gave rise to more frequent and disagreeable after-effects. These were substantially the same after conchinin as after quinine; vomiting, however, was more common after the former. In the treatment of intermittent fever, conchinin is quite as effectual as quinine.

24. *Beck on Apomorphia as an Expectorant.*—The author concludes (*Deutsche Med. Wochen.* Feb. 1881) that apomorphia is decidedly superior to ipecacuanha, antimony, and the preparations of ammonia, in the treatment of bronchial catarrh, whether of primary or of secondary origin. It should be given in the first stage of the disease, when the cough is dry, and only sonoro-sibilant rhonchi are heard over the chest. Within twenty-four hours free expectoration sets in, and bubbling crepitation takes the place of the dry sounds. In the broncho-pneumonia of children, it should be given during the stage of resolution, to promote the expulsion of the inflammatory products from the bronchi. In acute laryngitis, its usefulness is very doubtful. The following is the prescription employed by the author: Hydrochlorate of apomorphia gr. j; dilute hydrochloric acid ℥ xx; syrup ℥ j; distilled water ℥ iv. Of this mixture, a teaspoonful may be given every hour to children between three and ten years of age. Adults may take a tablespoonful every three or four hours. Given in this way, apomorphia does not give rise to nausea, or disturb digestion.

E. BUCHANAN BAXTER.

25. *Weise on the Treatment of Diphtheria.*—The author states (*Berl. Klin. Wochen.* No. 4), as the result of his experience of Guttmann's treatment of diphtheria by pilocarpin, that it produces an excellent and rapid effect in many cases. His own treatment, under which he has had fifty-four cases without a death, is with salicylic acid and benzoate of soda. Every hour and a half the patient inhales, or has his throat painted with, a solution of salicylic acid (one part, by weight, to fifty of glycerine and rectified spirit in equal parts), and at the same time takes benzoate of soda internally, and stimulants. The inhalation is given with an instrument constructed by Dr. Weise, consisting of a small spray-apparatus combined with a tongue-depressor.

26. *Tacke on Atropin as a more effectual remedy than Extract of Ergot in Menorrhagia and Hæmoptysis.*—The author (*Berl. Klin. Wochen.* No. 6, 1881) having injected sulphate of atropia subcutaneously for eczema in a female patient ($\frac{1}{200}$ grain twice daily in distilled water for two days) noticed that the menses, which had been very profuse, became moderate, and remained so. The same result he has seen follow five times in two other patients, and in a case of hæmorrhage from the lungs the hæmorrhage twice ceased immediately on the injection. He holds that as a remedy for visceral hæmorrhage it is preferable to extract of ergot: 1st, on account of its certainty, and 2nd, because, in the strength used by him (about $\frac{2}{3}$ grain to an ounce of distilled water), it does not cause the inflammation which almost invariably follows the subcutaneous injection of extract of ergot.

JAMES ANDERSON, M.D.

MEDICINE.

RECENT PAPERS.

1. SÉE, G.—On Uræmic Dyspnœa. (*Le Praticien.*)

2. ROCHARD, JULES.—On an Epidemic of Sweating Sickness. (*Le Progrès Méd.*, No. 10.)

3. ERB.—On a Case of Tumour of the Ascending Frontal Convolution. (*Arch. für Klin. Med.*, xxvii.)

4. VIRCHOW.—On Neurotic Atrophy. (*Berl. Klin. Woch.*, No. 29, 1880.)

5. RALFE, C. H.—On a Case of Diabetes Insipidus characterised by an Excessive Elimination of Phosphoric Acid (the so-called Phosphatic Diabetes). (*Lancet*, March 1881, pp. 406, 450.)

6. PAGE and OTHERS.—On Desquamation after Scarlet Fever. (*Lancet*, Feb. 1881, p. 319 *et seq.*)

7. ALLAN, JAMES B.—On the Period of Incubation in Typhus Fever. (*Brit. Med. Jour.*, Feb. 1881, p. 303.)

8. WESTPHAL and ERLENMEYER.—On Paradoxical Muscular Contraction. (*Arch. für Psych.*, Band x.)

9. SCHEIBER.—On a Case of Microscopic Round Worms (*Rhabditis Genitalis*) in the Urine of a Female Patient. (Virchow's *Archiv*, Band lxxxii, p. 161.)

10. SCHEFFER.—On a Case of Splenic and Gastric Acid in a Child. (*Jahr. für Kinder.*, Band xv, p. 445.)

11. LANCEREAUX and DEPIERRE.—Diabetes associated with Disease of the Pancreas. (*Jour. de Méd. et de Chir. Prat.*, Dec. 1880.)

12. BARTH.—On the Treatment of Chronic Bronchitis by Puncture-Cauterisation. (*La France Méd.*, Feb. 1881.)

13. MENIÈRE.—On Menière's Disease. (*La France Méd.*, p. 229.)

14. RIEGEL.—On the Pulsus Bigeminus. (*Deutsches Archiv für Klin. Med.*, Feb. 1881.)

15. TRIPIER.—On Adult Cephalic Murmurs. (*Revue de Méd.*, Feb. and March 1881.)

1. *Sée on Uræmic Dyspnœa.*—M. G. Sée (*Le Praticien*) has published notes of the case of a young woman attacked by urgent dyspnœa, with great oppression and cyanosis. There were a faint systolic apex-murmur, and a few râles over the lungs posteriorly, but nothing sufficient to account for the symptoms. The urine was very albuminous. There was no œdema. She died in a few days. The kidneys were large and red. M. Sée lays down the rule that, when a person is attacked with dyspnœa without obvious cause in the thoracic organs, the urine should be examined for albumen. He relates two other cases, in which the dyspnœa simulated spasmodic asthma, and was not readily diagnosed on that account.

2. *Rochard on an Epidemic of Sweating Sickness.*—M. Jules Rochard has reported (*Le Prog. Méd.*, No. 10) to the Academy of Medicine on the epidemic which occurred in the island of Oléron during the summer of 1880. The disease began in June in the village of Allards, and remained there till the 2nd July, during which time there were five deaths. In July a death occurred in a neighbouring village, and became the cause of a new epidemic. The disorder was the sweating sickness, characterised by its sudden onset, special eruption, and grave symptoms. The cases became so numerous that the two doctors on the island were unable to fulfil the requirements of the situation, and two naval surgeons were sent to assist. The disease spread all over the island. No medical man was attacked. The contagion seemed to emanate from the corpses: putrefaction set in very early. The coffins were made very badly, and the

products of decomposition probably escaped and contaminated the clothes of those who carried the coffins to the cemeteries; hence the frequency of the disease amongst these. According to Magnel, the temperature is 41 deg., 42 deg., and 43 deg. Cent. (105.8 deg., 107.6 deg, and 109.4 deg. Fahr.), but in this epidemic such high figures were not noticed. At the commencement it reached 39 deg. Cent. (102.2 Fahr.), and remained at about 37 deg. and 38 deg. Cent (98.6 deg. and 100.4 deg. Fahr.), while in cases where the sweating was suppressed it reached 41 deg. and 42 deg. Cent, The treatment consisted of ipecacuanha in doses of 1½ grammes (22 grains). Refrigeration gave good results in some cases of high temperature.

3. *Erb on a Case of Tumour of the Ascending Frontal Convolution.* — Erb (*Archiv für Klin. Med.*, Band xxvii) says a cortical lesion of the right ascending frontal convolution was diagnosed by the following symptoms; at first, monoplegia of the left arm, with periodical spasms of this extremity; later, a similar affection of the lower limb on the same side; cerebral nerves normal; no affection of sensation; no loss of consciousness during the attacks. The affected limbs show vaso-motor disturbances in the shape of redness, swelling, and elevation of temperature. Cutaneous and tendon reflexes in his case presented a peculiar condition; the former were diminished, the latter increased. These different relations of the cutaneous and tendon reflexes may possibly afford, in doubtful cases, a means of distinguishing spinal from cerebral lesions.

4. *Virchow on Neurotic Atrophy.*—Professor Virchow (*Berl. Klin. Woch.*, No. 29, 1880) brought before the Berlin Medical Society two cases of neurotic atrophy, of the type to which he would apply the term 'circumscribed', to distinguish from those cases of crossed and hemi-atrophy due to lesions of the nervous centres. One of the cases shown, a man named Schwahn, was the original case upon which Romberg founded his doctrine of trophoneurosis, and of which Professor Virchow has notes taken by himself in 1859. The other case was a woman. In both the face was the principal part affected, the atrophy affecting one half. In the man's case, the bones were affected, because the disease began during development. In the woman, the bones were unaffected, the condition having commenced when she was 25 years old. Professor Virchow pointed out that the facts do not support the view that the atrophy depends on vaso-motor spasm; the vessels are easily seen, and the skin reddens very readily when rubbed; there is no definite alteration of sensation, though here and there slight numbness is complained of; there is no true paralysis of the muscles; they are only weakened by their bad nutrition. The affection does not involve the whole area supplied by particular nerves or branches of nerves, but only portions of those areas. The distribution of the lesions in both cases was described by Dr. Virchow. In the man's case, the origin of the condition was when he was 9 years old; he had swelling of the entire neck and region at the angle of the lower jaw, which got well in a week; the skin in this part became pigmented, but in other places the atrophied patches are notably white. Dr. Virchow believed that the atrophy had made no progress since his former notes were taken, in 1859. The woman's case began after a confinement, but the relation to the confinement is not clear, as it was six months or a year afterwards that she first noticed anything. As in Schwahn, the first symptom was inflammatory swelling, in her case near the left eye. A little after, she slipped down and struck the back of her head. There is no abnormality now to be found at the seat of the blow. Dr. Virchow refers to some published cases, in which a blow has been assigned as the exciting cause. In conclusion, he says that complete anatomical examination has never been made on one of these cases, and that there are few phenomena in the range of neuropathology which so much need explanation, or in which nature apparently offers so neat an experiment for distinguishing the different kinds of fibres in the peripheral nerves. Robert Saundby, M.D.

5. *Ralfe on Cases of Diabetes Insipidus characterised by an Excessive Elimination of Phosphoric Acid.*—Six cases are recorded in the *Lancet*, March 1881, pp. 406, 450, by Dr. C. H. Ralfe, in which, with a large increase in the quantity of urine, there was also an excessive elimination of phosphoric acid. The amount of phosphoric acid varied from 5.2 grammes to 7.6 grammes, the normal quantity in health ranging from 2.5 to 3 grammes. After a very careful *resumé* of what is known regarding the part which phosphoric acid plays in the system, Dr. Ralfe passes on to the necessary treatment of such cases, the main indications of which are rest and increased nutrition. To obtain these, opium or codeia should be given in full doses until the pains and the nervous system generally are quieted, then general tonics as quinine, cod-oil, mineral acids, iron, strychnine, etc., should follow; iodide of potassium if there be any syphilitic history. Warm baths, followed by the cold douche, are very grateful to the neuralgic pains that accompany the disease. Milk should form a chief constituent of the food; alcohol and coffee must be avoided. Change of air is also often desirable.

6. *Page and others on Desquamation after Scarlet Fever.*—In the *Lancet*, Feb. 1881, p. 319, *et seq.*, an instructive correspondence has sprung up from the fact that a medical man sent home a school-boy three weeks after he had shown, subsequently to exposure to infection, a slight but suspicious eruption due to scarlet fever. Previously to being sent home, the lad had had several baths and anointings, and showed no trace of eruption. Six weeks subsequently to the original rash, he freely desquamated. The father was alarmed, and blamed the medical attendant for running any risk to the patient and others by so early a discharge, and wrote to the *Lancet*, Feb. 12, asking the opinion of the profession upon the subject. Dr. Page, in reply, states that often in slight cases desquamation is long delayed. Five weeks have to his knowledge elapsed before any, although carefully watched for, has been discovered. Slight cases, he says, require really more careful watching than severe ones, to avoid sequelæ and risks of contagion; and no scarlatinal patient is safe from conveying infection for eight weeks, or even longer. Dr. Page's conclusions are adversely commented upon at p. 357; one gentleman asserting that 'three weeks is sufficiently long to isolate a patient with scarlet fever, whether desquamation be going on at the time or not, if the following plan be adopted—carbolic oil smearings and hot baths, with frequent change of linen'. [Would this gentleman allow such a case to mingle with his own young family, supposing he has one? The reporter lately met a medical practitioner who doubts altogether whether scarlet fever was infectious, and who allows his cases very great latitude as regards isolation.—*Rep.*]

7. *Allan on the Period of Incubation in Typhus*

Fever.—Mr. James B. Allan, in the *Brit. Med. Jour.*, Feb. 1881, p. 303, reports three cases, showing that seventeen days, twenty-two days, and eight or nine days respectively, were capable of being fixed as the duration of the incubation periods. R. NEALE.

8. *Westphal and Erlenmeyer on the 'Paradoxical Muscular Contraction'.*—Professor Westphal has given the above name to the phenomenon which he describes as follows (*Archiv für Psych.*, Band x). If, in certain diseases of the central nervous system, we quickly and strongly flex the ankle of the patient while lying in bed (occasionally slow flexion will also succeed), we find that the foot left to itself remains in the position given to it, not sinking by the force of gravity into the natural position. On observing the tendon of the tibialis anticus, we find that a moment after the flexion it suddenly starts out and remains in this condition. Corresponding to the action of the tibialis anticus, the foot is adducted. The foot remains in this position for some time (on one occasion observed by Professor Westphal for twenty-seven minutes), and then sinks gradually into its natural position. Dr. Westphal named this phenomenon 'paradoxical muscular contraction', because here the passive shortening of the muscle acts as a stimulus, and this method of producing a contraction is in direct opposition to the method already described by Erb and himself, viz., by sudden extension or concussion. Dr. Erlenmeyer adds (*Centralb. für Nervenheilk.*, 1880, No. 17) that he finds patients are unable by voluntary contraction of the antagonists to overcome this contraction of the tibialis anticus. He has seen the contraction last for three-quarters of an hour. As to the cause, Dr. Erlenmeyer believes that it lies, not in the relaxation of the tibialis anticus, but in the lengthening or extension of its antagonist, the gastrocnemius. To prove this, he instituted two experiments, in the first of which he considers that he changes the lengthening of the gastrocnemius into a shortening; in the second, that he prevents altogether the extension or lengthening of the muscle. To accomplish the first object, he flexes the knee, and pushes with the hand the muscle of the calf towards the heel, a proceeding he found possible for a distance of nearly an inch. The contraction of the tibialis anticus fails in every such experiment, he says, the foot falling directly into its natural position. To accomplish the second object, he uses either the same method as the last, or, with the knee flexed as before, he pushes the calf-muscle so far towards the knee that the ankle can still be fully flexed without resistance. In both cases the contraction of the tibialis anticus fails. He considers that here we have a tonic muscular contraction produced by extension of an antagonist, and differing in character from the foot-clonus or 'foot-phenomenon' of Westphal, which results from passive restraint of clonic spasms in a muscle stimulated by its sudden extension. He proposes for it the name 'muscle phenomenon'. Dr. Westphal (*Centralb. für Nervenheilk.*, 1880, No. 20) replies to the above. He says it is not the pushing upwards or downwards of the calf-muscles that prevents the occurrence of the phenomenon, but simply the pressure on the muscles, which acts as a mechanical stimulus, producing extension of the ankle-joint. He had already weighed and rejected the propositions made by Dr. Erlenmeyer.

9. *Scheiber on a Case of Microscopic Round Worms (Rhabditis genitalis) in the Urine of a Female Patient.*—The patient in this case (Virchow's *Archiv*, Band lxxxii, p. 161), confined to bed for nine weeks with complicated disease, and in a neglected condition, passed a cloudy urine, rapidly becoming alkaline, which showed, under the microscope, numerous round worms, male and female, about 1-25th of an inch in length. On the suspicion that they originated in the genital organs, these were thoroughly washed several times daily, and within three days the worms had entirely disappeared. They were supposed to belong to the genus *Rhabditis*, mostly found living in marshy ground.

10. *Scheffer on a Case of Gastric and Splenic Cancer in a Child.*—The patient in this case (*Jahrb. für Kinder.*, Band xv, p. 425), an extremely cachectic boy aged 14, was admitted, complaining of pain in the left side, with loss of appetite and sleep. In the left hypochondrium was a large, smooth, painful tumour, corresponding to the enlarged spleen, to the right of which distinct splashing could be heard on succussion. There were also increase of white blood-corpuscles, irregular remittent fever, and slight pleuritic effusion on the left side. After admission, he had on two occasions slight vomiting after meals, and four weeks from admission (thirteen weeks from the commencement of the illness), he had an attack of coffee-ground vomiting, and died in collapse. As no symptoms had pointed to extensive implication of the stomach, the diagnosis of primary splenic cancer had been made. The necropsy, showed, however, an ulcerated medullary cancer of the fundus of the stomach, which had perforated into the spleen and almost entirely destroyed it. The cancerous masses occupied almost the whole fundus of the much dilated stomach, leaving the pylorus free. Below the diaphragm, in the position of the spleen, was a large space filled with air, and bounded above and below by splenic tissue.

JAMES ANDERSON, M.D.

11. *Lancereaux and Depierre on Diabetes associated with Disease of the Pancreas.*—In 1877, M. Lancereaux read a note at the Académie, in which he demonstrated the existence of a form of diabetes mellitus, found in conjunction with pancreatic lesions. This, he alleged, constituted a special and distinctive variety of diabetes, characterised by a *début brusque*, considerable emaciation, with polydipsia and polyphagia, by peculiar alvine evacuations, and especially by a very rapid evolution. The study of Lancereaux has been made the basis of further investigations by M. Depierre (*Jour. de Méd. et de Chir. Pratiques*, Dec. 1880), which have led to the discovery of new facts in this connection. Various kinds of pancreatic alterations may be regarded as leading to this kind of diabetes. They may be primary lesions, or they may be the secondary result of the presence of calculi, or else they may be caused by compression of the ducts by neoplasms. In all such cases, there appeared to be a complete abolition of the pancreatic function. This suppression of a digestive function is revealed by special symptoms, thus constituting a variety of diabetes (called by the author 'emaciating diabetes') which differs greatly in its clinical aspects from ordinary polyuria. In the latter disease there is said to be, as a rule, an initial stage of obesity, or at least of apparent health, thus rendering the progress of the malady slow and insidious. In pancreatic diabetes, on the other hand, we notice along with the absence of *embonpoint* a quite sudden explosion of symptoms. These ordinarily consist of grave intestinal manifestations, vertigo, vomiting, and jaundice. These symptoms after awhile indeed disappear, but they leave the patients in a condition of profound debility. Soon the essen-

tial symptoms of the disease put in their appearance. Sometimes, indeed, they occur from the very beginning, without any previous indications of morbid changes. They are polydipsia, polyphagia, polyuria, and autophagia (the latter probably meaning tissue-waste and emaciation). This combination of symptoms is rapidly established, reaching an acme in a few weeks or months, and it is this very point which appears to afford pathognomonic indication of the existence of this variety of diabetes. The habitual presence of diarrhœa is also noted. Sugar is voided in great abundance with the urine. Pulmonary phthisis is also a frequent complication. Emaciation is rapid. In a few months the patients lose successively their physical, intellectual, and genital powers. Then complete prostration and profound marasmus set in, to which there is superadded hectic fever, with the symptoms of consumption. The average duration of the sickness is about twenty months, though it may end in half a year, or last even three years. Greasy or creamy stools may afford a clue to the establishment of the diagnosis of pancreatic diabetes, but it must be remembered that they occur also in other affections of that organ. Another point which must be considered is the deficient digestion of nitrogenised substances in atrophic conditions of the pancreas. Thus, pieces of undigested muscle found in the stools of patients may awaken a suspicion of this disease. Besides the ordinary treatment of diabetes mellitus, the administration of pancreatine suggests itself as affording a possibility of artificially supplying the lacking aids to digestion.

12. *Barth on the Treatment of Chronic Bronchitis by Puncture-Cauterisation of the Thorax.* — A young woman (*La France Méd.*, Feb. 1880), aged 30, had suffered for three years from bronchitis, against which all the usual treatment had been tried unsuccessfully. She was admitted into the Pitié Hospital to M. Peter's wards for three months, and was submitted to the usual therapeutic measures. She became so weak that it was feared that she would die, when puncture-cauterisation of the thoracic walls was applied. After the first cauterisation, the improvement was evident. Six cauterisations were made at intervals of from three to four days; after the third, the patient might be considered cured.

13. *Menière on Menière's Disease.*—Dr. Edward Menière has just published a memoir on the disease described by his father in 1861. Menière's disease is constituted by three principal symptoms: 1. The noises or whistlings which precede the crisis; 2. The vertigo, accompanied by nausea and vomiting; 3. Deafness, as a rule incurable. The writer of the memoir details at length the treatment of this disease (*La France Méd.*, p. 239), in which he follows the method proposed by Professor Charcot. The patients take after their meals pills composed of 10 centigrammes of sulphate of quinine and 10 centigrammes of fluid extract of cinchona. He thus commences with 30 centigrammes of sulphate of quinine, and goes progressively up to 70 and 80 centigrammes, and even 1 gramme; then he enjoins absolute abstention from it during a fortnight, three weeks, or even a month, but recommences during the first period of a month, giving 40 centigrammes at first setting off. The effect of the quinine is to diminish and cause the vertigo to disappear, and, on the other hand, to modify the deafness. M. Menière does not pretend to formulate a curative treatment of a disease against which all the resources of therapeutics have hitherto been unavailing, but quinine has, at least, the advantage of calming the most troublesome symptoms.

14. *Riegel on the Pulsus Bigeminus.*—Dr. Franz Riegel (*Deutsches Archiv für Klin. Med.*, Feb. 1881) contributes a careful study of two such cases, numerous graphic tracings. The one case had a systolic mitral, and tricuspid murmur, with 80 apex-beats per minute, 80 visible undulations of the jugular veins, and 40 radial pulsations. Two apex-beats and jugular undulations were close together, and corresponded to one radial pulsation. The other case had no venous undulation, and had 88 heart-beats, with 44 radial pulsations. These cases, then, were similar to those described by Leyden and others, as instances of independent contraction of one ventricle without the other—the right contracting twice for one systole of the left. But the author shows from sphygmographic evidence that each radial pulsation is followed by a faint wave, imperceptible to touch, and synchronous with the second of the redoubled cardiac impulses. He, therefore, holds that such cases have been erroneously apprehended, and that both ventricles simultaneously contract, although the second is fainter than the first of the double heart-beats, and does not send out a wave strong enough to reach the wrist.

15. *Tripier on Adult Cephalic Murmurs.*—M. Tripier (*Revue de Méd.*, Feb. and March 1881) points out that a cephalic murmur is found in adults, and that he has observed it in several chlorotic patients, and in one case of each of the following—metrorrhagic anæmia, pernicious anæmia, intracranial tumour, and hydrocephalus. It is a systolic murmur, and is best heard over the temples, especially on the right side. It is not at all influenced by change of posture, but can be modified or suppressed by pressure on the carotids, and it diminishes or increases according as the patient improves or retrogrades. It is not transmitted from the heart, but is of local origin, as in some cases no cardiac murmur was present. M. Tripier has never met with the continuous cephalic murmur.

George A. Gibson, M.B.

SURGERY.

RECENT PAPERS.

1. Schulz — Unilateral Injury of the Spinal Cord. (*Central. für Nerven.*, 1880, No. 15.)

2. Czerny.—On Intestinal Resection. (*Berl. Klin. Woch.*, 1880, No. 45.)

3. Kraussold.—On the Suture of Nerves and Tendons. (*Central. für Chir.*, 1880, No. 47.)

4. Skarnowsky.—The Treatment of Atheroma without Operation. (*Wratsch*, No. 49.)

5. Tillmanns. — Tar, Soot, and Tobacco Cancer. (*Deutsche Zeitsch. für Chir.*, Band xiii, Heft 5 and 6.)

6. Gay.—On a Case of Telangiectasis. (*Lancet*, Jan. 1881, p. 135.)

7. Tait, Lawson.—On Cholecystotomy in Dropsy of the Gall-Bladder due to Impacted Gall-Stones. (*Brit. Med. Jour.*, Nov. 1879, p. 778.)

8. Lee, Henry.—On the Radical Cure of Varicocele. (*Brit. Med. Jour.*, Jan. 1881, p. 123.)

9. McLeod.—Excision of a Blood-Cyst from the Axilla. (*Lancet*, Jan. 1881, p. 133.)

10. Golding-Bird, C. H.—On the Mechanical Treatment of Croupous Membrane after Tracheotomy. (*Lancet*, March 1881, p. 407.)

11. DOWNES.—Pulsating Bronchocele Cured by Ligature of the Vessels. (*Lancet*, March 1881, p. 458.)
12. OSBORN, S.—On the Cure of Hydrocele. (*Lancet*, March 1881, p. 372.)
13. TEALE, J. W.—On Retrogressive Scirrhus of the Breast. (*Lancet*, March 1881, p. 373.)
14. SMITH, HENRY.—On a Serrated and Cutting Cautery in the Operation for Hæmorrhoids and Prolapses. (*Lancet*, March 1881, p. 368.)
15. SPIERS, W. R. — On a Case of Rhinorrhœa. (*Lancet*, March 1881, p. 369.)
16. OTIS.—The Radical Cure of Stricture.

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1. *Schulz on Unilateral Injury of the Spinal Cord.*—The patient in this case (*Cent. für Nerven.*, 1880, No. 15), a male, aged 29 years, received a stab in the back between the spines of the fifth and sixth dorsal vertebræ, a little to the right of the middle line, and about two inches in depth. Soon afterwards there appeared paresis and hyperæsthesia of the right lower limb, anæsthesia (with intact motor power) of the left lower limb, involuntary passage of fæces, and retention of urine. Half a year later, the right lower limb showed paresis, with laboured but not ataxic movement. It was also thinner than the left, but presented no difference in colour or temperature. The left limb showed also no ataxy. The muscular sense of the left limb was normal, that of the right diminished. On the right side the skin was hyperæsthetic as high as the seventh dorsal vertebra; above this, as high as the sixth, it was anæsthetic. The sensations of tickling, touch, and pain, were all increased on the right; the sensation of temperature was normal. For electric currents, the skin on the right side, both limb and trunk, was very sensitive; while, on the left side, it was normal, or even diminished. The left side showed no actual anæsthesia, but a marked analgesia; and, corresponding to the anæsthetic zone of the right side at the sixth dorsal vertebra, was a zone of hyperæsthesia. The tendon-reflexes were normal on the left side, much increased on the right. The electric irritability of the nerves and muscles was alike on both sides.

2. *Czerny on Intestinal Resection.* — Professor Czerny communicates (*Berl. Klin. Woch.*, No. 45, 1880) three cases of intestinal resection which he has performed. In two cases, the gangrenous coil of intestine in a strangulated hernia was resected; and, in the third case, a malignant tumour of the colon was removed. In one of the first two cases, the patient recovered perfectly without fever or reaction of any sort; in the second, the already pulseless patient died during the operation in a fit of fæcal vomiting. The third case was the most remarkable. A female, 47 years old, with a tumour in the abdomen, diagnosed as intestinal cancer, had vomitings and diarrhœa. On operation, there was found a large tumour of the transverse colon, firmly attached to a coil of the sigmoid flexure. Part of the sigmoid flexure was first resected, the ends being brought together with thirty-three sutures; then a large piece of the colon was removed, and the ends united by twenty-six sutures. Lastly, a wedge-shaped piece of the meso-colon was removed, also necessitating ligatures. A drainage-tube was inserted, and the wound in the abdominal wall closed by means of four deep and eight superficial sutures. The patient recovered, and was living half a year after the operation, although, from the infiltration of the mesenteric glands, a recurrence is inevitable. Dr. Czerny proceeds as follows. The intestine being compressed above and below, the diseased part is removed along with the corresponding wedge of the mesentery. The ends are now disinfected, and a double row of carbolised silk sutures applied. Those in the first row include about a twelfth of an inch of the serous and muscular layers of each end of the intestine, and are about a twelfth of an inch apart. A second row of sutures, about a fifth of an inch apart, are applied over and partly including the first. The intestine is then returned into the abdomen, and antiseptic dressing applied.

3. *Kraussold on the Suture of Nerves and Tendons.*—The case communicated by the author (*Central. für Chir.*, 1880, No. 47) is of some interest, as showing to what an extent suture of these structures may be employed with benefit. A female patient, melancholic and suicidal, had made a transverse cut on the palmar surface of both forearms, an inch and a half above the left wrist-joint, and two inches and a half above the right. On the left side, the radial and ulnar arteries were divided; the radial and ulnar nerves completely, the median nerve more than three-fourths; also the tendons of the flexor sublimis digitorum entirely, and those of the flexor profundus digitorum partly. On the right side, the radial, ulnar, and interosseous arteries were divided, the radial and median nerves completely, the ulnar nerve two-thirds, also the tendons of the flexor profundus and sublimis, and of the flexor longus pollicis. Both ends of the arteries were ligatured, and the nerves and tendons brought together with sutures. Three weeks after the injury, sensibility was perfectly normal and active, and passive movements were all possible, although still slow and weak. A small defined spot on the ball of the little finger became gangrenous, but otherwise there was no fever nor reaction.

4. *Skarnowsky on the Treatment of Atheroma without Operation.* — The successful treatment of ranula by Professor Panas, with injections of three to ten drops of a ten per cent. chloride of zinc solution, suggested to the author the trial of the same treatment for atheromatous cysts (*Wratsch*, No. 49). In the first case, the tumour, situated on the upper eyelid, disappeared after three injections at intervals of five days. Since then he has had eleven cases, and he finds that from three to nine injections suffice to remove the tumour. Slight pain and inflammation follow the injection, but in no case was an abscess produced.

5. *Tillmanns on Tar, Soot, and Tobacco Cancer.* —The workmen in coal-tar and paraffin manufactories suffer very frequently from acute and chronic inflammations of the skin. Volkmann has already described several cases, in which true epithelial cancer was developed from these chronic inflammations, and this author (*Deutsche Zeitschr. für Chir.*, Band xiii, Heft 5 and 6) now adds another, ending fatally after numerous operations. This form of cancer, and also chimney-sweepers' cancer, and epithelial cancer of the lip and tongue in inveterate smokers, the author attributes to irritation by the products of imperfect combustion; not, however, saying that this is the actual cause, but simply that it is the exciting cause in those disposed to the development of cancer. JAMES ANDERSON, M.D.

6. *Gay on a case of Telangiectasis.* — In the *Lancet*, Jan. 1881, p. 135, the history and treatment of a very extensive nævus are given in detail by Mr. Gay. The patient was a girl aged 8. The tumour occupied the whole of the right cheek, bulging both

on its inner and outer surfaces in large masses of closely packed convoluted veins, getting between the teeth as the child talked or ate. The palate and lower lips were also considerably involved. Although previous treatment with red-hot needles had failed, Mr. Gay determined to cauterise with large blunt needles made red-hot by benzine vapour. The result from the first attempt was not satisfactory. On the second occasion, five punctures were made in an area of three-fourths of an inch square; two of the punctures bled copiously, throwing out jets of dark mixed with crimson blood, of the same size as the orifices; deeply placed ligatures tied tightly over the orifices arrested the bleeding. Consolidation followed in the spot operated upon. A series of similar operations, plugging the bleeding orifices, however, with pledgets of wool saturated with perchloride of iron, instead of using the ligature, succeeded in obliterating a very considerable portion of the nævus. What remains, Mr. Gay has no doubt of being enabled, eventually, to effectually remove by a repetition of the process.

7. *Tait on Cholecystotomy in Dropsy of the Gall-Bladder due to Impacted Gall-Stone.*—Mr. Lawson Tait read before the Royal Medical and Chirurgical Society the history of a case in which the operation of opening the gall-bladder by abdominal section was successfully performed (*Brit. Med. Jour.*, Nov. 1879, p. 778). The patient, aged 40, had borne six children, and had been healthy to within a year of her admission into hospital with a firm, elastic, head-shaped tumour in the region of the gall-bladder. An opening was made in the middle line to the extent of four inches, when the tumour was found to be the distended gall-bladder, filled with white starchy-looking fluid, and two gall-stones, one loose, and the other impacted at the entrance of the duct, which could only be removed by breaking it up. The stones and fragments weighed 94 grains. The wound in the gall-bladder was stitched to the upper end of the wound in the abdominal walls. The wound soon closed up, and the patient left the hospital in six weeks in perfect health. [Mr. Tait alludes to the unsuccessful case of Dr. Marion Sims, reported in the *Brit. Med. Jour.*, June 1878, p. 811 (*vide* the London Medical Record, 1878, p. 300), who attributed to Dr. Handfield Jones the credit of being the first to recommend the operation; but a reference to the *Lancet*, Oct. 1859, p. 421, will show that Dr. Thudichum, in a paper read before the Medical Society in Oct. 1859, 'suggested that in some appropriate cases (of gall-stones) an operation for the removal of the gall-stones through the abdominal walls should become a subject of consideration for surgeons'. Mr. Hilton, the President, stated, 'he should like to hear from physicians the number, nature, and prospects of such cases in which the operation for extracting gall-stones could be thought of. The operation would be impossible in cases where the calculus was closely embraced by the bladder. But from his knowledge, he thought it not impossible that cases fit for operative relief might present themselves; and, in cases of distended gall-bladder (which might occur with calculi), an operation, such as the author had mentioned, had actually been performed with success.' In the *Lancet*, Nov. 1876, p. 641, Mr. Maunder explained how he came to entertain the question of operative interference in a fatal case of impacted gall-stones, to which, however, the patient and her friends declined to submit. In the London Medical Record of March 1879, notes of a successful case of opening the gall-bladder for overdistension are given, in which Mr. George Brown was the operator. In the *Brit. Med. Jour.*, July 1878, p. 44, Dr. Joyce shows that the operation had been performed half a century before the case reported by Dr. Sims; and Mr. Hulke, in the *Journal*, Jan. 1879, p. 11, reminds us that Petit in 1743 was familiar with the operation. —*Rep.*]

8. *Lee on the Radical Cure of Varicocele.*—At the Royal Medical and Chirurgical Society, Mr. Henry Lee read a paper on the radical cure of varicocele (*Brit. Med. Jour.*, Jan. 1881, p. 123). The plan advocated is to remove a portion of the anterior skin of the scrotum, and subsequently to divide the veins which are to be obliterated. All the steps of the operation are conducted through the wound made by the removal of the skin. The veins are temporarily compressed so as to prevent hæmorrhage, and then divided, their cut orifices being sealed with the black hot cautery. The edges of the wound are united by carbolised ligatures, union by the first intention taking place, and the patient allowed to go about after three or four days. In the discussion which followed, Mr. Pearce Gould described his own operation, which consisted in passing a loop of platinum wire round the spermatic veins subcutaneously, and then connecting it with a galvanic *écraseur*, and making it burn a way out. Mr. Gould had operated in eleven cases, nine being cured without accident, two of the cases being incomplete.

9. *McLeod on Excision of a Blood-Cyst from the Axilla.*—In the *Lancet*, Jan. 1881, p. 133, Surgeon-Major K. McLeod gives the history of a case of a Hindu, aged 45, who was admitted two months after he noticed a tumour in his left axilla. On admission, the tumour was as large as a good-sized cocoa-nut, occupying the whole of the axillary space. Extirpation with a fine trocar and cannula showed that venous blood, apparently undergoing disorganisation, filled the tumour. Excision, details of which are given, was successfully carried out. The following is Dr. Mc Connell's report of the tumour. '*Venous Aneurismal Sac removed from a Male Hindu.* — The sac or cyst is about the size of a fœtal head. A small portion of it was cut away during operation, and, at one part, is a rounded opening capable of admitting the little finger, which is the orifice of communication of the sac with the axillary vein. The cyst contained only fluid blood. The cyst-walls seem quite identical with the ordinary structure of the walls of a vein; so that there can be no doubt that the sac was an aneurismal-like expansion from the axillary vein, and was not an adventitiously formed cyst.' [A very valuable paper on sero-sanguineous cysts of the axilla and their relation to nævi was read by Mr. Birkett before the Royal Medical and Chirurgical Society in June 1868, an abstract of which may be found in the weekly periodicals of that date. *Vide Med. Digest*, Sect. 1744-5.—*Rep.*]

10. *Golding-Bird on the Mechanical Treatment of Croupous Membrane after Tracheotomy.*—In the *Lancet*, March 1881, p. 407, Mr. C. H. Golding-Bird makes a valuable suggestion in the treatment of cases of tracheotomy. He objects to inserting a round tracheotomy-tube, through which blood, mucus, and false membranes are with difficulty extruded, immediately after the trachea is opened. By the aid of a tracheal dilator, the blades of which lie parallel to the trachea, this tube is kept well open, so that pieces of membrane can be removed by forceps, or any mucus by the aid of small pieces of sponge held

by dressing forceps. If the membrane be very low down, a wire brush, similar to those used to cleanse the tubes of feeding bottles, may be passed down to the bifurcation of the bronchi, and, by rotation may remove, at times, large quantities of false membrane.

11. *Downes on Pulsating Bronchocele Cured by Ligature of the Vessels.*—In the *Lancet*, March 1881, p. 458, Dr. Downes reports the case of a lad, aged 10 years, with a pulsating bronchocele as large as his head. Ligatures were applied to both the arteries, and, on the eighth day subsequently the goître was only half its original size. The boy ran away on the tenth day, taking the ligatures with him, but two years afterwards he was stated to be alive, and the goître to have quite disappeared.

12. *Osborn on the Cure of Hydrocele.*—Mr. S. Osborn, in the *Lancet*, March 1881, p. 372, gives notes of two cases of hydrocele cured by a single tapping, with the subsequent use of the galvano-suspensory bandage. One case had existed for seven or eight years, and the other, a double encysted hydrocele, had troubled the patient for six years. The galvanic bandage maintained permanent contraction of the scrotal muscles.

13. *Teale on Retrogressive Scirrhus of the Breast.*—Mr. J. W. Teale read notes before the Clinical Society (*Lancet*, March 1881, p. 373) of one of these rare cases, which occurred in a widow lady, aged 53. Eleven years previously its removal had been urged, but declined. The tumour rapidly grew and ulcerated, and, to deaden pain, chloral was taken in large doses. She lived for two years on milk, and was thought to be at death's door. When she was persuaded to leave off chloral, the health improved, and the tumour shrank away, in consequence, Mr. Teale thinks, of the enforced low diet. [A similar case to the above, under Mr. (now Sir H.) Thompson's care, is reported in the *Med. Times and Gaz.*, Jan. 1867, p. 34. In the *Brit. and For. Med.-Chir. Rev.*, Oct. 1850, p. 553, is the case of Dr. Switchell, who cured himself of a malignant ulcer at the inner angle of the eye by a strictly bread-and-milk diet. The unsatisfactory results of Mr. Hulke's experiment to carry out Dr. Beneke's vegetable diet, in cases of cancer, is to be found in the LONDON MEDICAL RECORD, 1880, p. 416, and may be consulted in connection with Mr. Teale's case.—*Rep.*]

14. *Smith on a Serrated and Cutting Cautery in the Operation for Hæmorrhoids and Prolapsus.*—Mr. Henry Smith, in the *Lancet*, March 1881, p. 368, explains the advantages derived from the use of cauteries with serrated and cutting edges (plates of which are appended) in operations about the anus.

15. *Spiers on a Case of Rhinorrhœa.*—In the *Lancet*, March 1881, p. 369, Mr. W. R. Spiers reports a case of constant watery discharge from the nose. No treatment availed to arrest the secretion until the patient filled his nostrils with goose-grease, and then, within a week, all discharge ceased. [Besides the case referred to by Mr. Spiers, as reported by Sir J. Paget, vide *Lancet*, vol. ii, 1878, p. 772, there are several other interesting cases referred to in the *Medical Digest*. Since the publication of this work, several instructive papers upon this subject may be consulted in the *Brit. Med. Jour.*, vol. ii, 1878, pp. 831, 921; vol. i, 1879, p. 175.—*Rep.*]

RICHARD NEALE, M.D.

16 *Otis on the Radical Cure of Stricture.*—In the second edition of his work, the author brings together 1,331 consecutive cases of urethrotomy without a death. Most of the operations were undertaken for strictures of large calibre not discoverable by the instruments ordinarily in use, but yet the cause, according to the author, of gleet. The average capacity of the urethra (male) he considers to be about number 18, English scale, and believes that there is a constant relation between the calibre of the urethra and the circumference of the flaccid penis. He relates two cases in which, eight years after division of strictures of large calibre, the urethra still permitted the passage of an instrument equal in size to number 20 English without any hitch. The *post mortem* appearances in a case operated on by Dr. Eldridge, of Yokohama, are also given, and show that, three years after operation in a most unfavourable case, no contraction had occurred. Strictures of the bulbo-membranous urethra are, he thinks, almost always spasmodic, and secondary to organic stricture of the penile urethra. Where organic stricture of the deep urethra does exist, he prefers, owing to the danger of hæmorrhage, and the probable presence of disease of the bladder and kidney, the operation of external perineal urethrotomy.

DAWSON WILLIAMS.

PATHOLOGY.

RECENT PAPERS.

1. WANNEBROUCQ and KELSCH.—Cerebral Localisations. (*Progrès Méd.*, 1881, No. 6.)

2. STURGE, W. A.—On a Case of Malformation of the Arm. (*Path. Trans.*, 1880.)

3. LEUBE, W., and FLEISCHER, R.—On Leukæmia. (Virchow's *Archiv*, Band lxxxiii, Heft 1.)

4. FITZ, R. H.—On a Case of Diabetic Coma. (*Boston Med. and Surg. Jour.*, Feb. 10, 1881.)

5. MARTIN.—On the Pathology of Tuberculosis. (*Gaz. Méd. de Paris*, Jan. 22, 1881.)

6. SASSESKY.—On Idiopathic Hypertrophy and Dilatation of the Heart. (*Petersburger Med. Woch.*, 1880, No. 33.)

7. RANK, C.—Poliomyelitis Anterior Acuta Adultorum. (*Deutsches Arch. für Klin. Med.*, Band xxvii, s. 129.)

8. KNOLL.—On Myocarditis and the other Results of Section of the Vagus in Pigeons. (*Separatabdrück aus der Zeitsch., für Heilk.*, 1880-1.)

9. WESTCOTT. — A Curious Case of Suffocation. (*Brit. Med. Jour.*, March 1881, p. 386.)

10. MESCHEDE.— On Pathological Changes, and the Functions of the Olivary Tracts of the Medulla Oblongata. (*Central. für Nerven.*, 1880, p. 517.)

11. STILLING.—On Primary Cancer of the Bronchia and Tissue of the Lung. (Virchow's *Archiv*, Band lxxxiii.)

12. ROGER and DAMASCHINO. — The Histology of Spinal Paralysis of Children and Progressive Muscular Atrophy. (*Revue de Méd.*, March 1881.)

1. *Wannebroucq and Kelsch on Cerebral Localisations.*—The authors describe (*Progrès Méd.*, 1881, No. 6) two cases which support the doctrine of the localisation of functions in the cerebral cortex. The first case was one of fracture of the skull, in which the inferior frontal and temporal convolutions were completely destroyed, but there was no paralysis. In the other case, which was one of mania, the symptoms during life were left brachial monoplegia and facial paralysis, rotation of the head and conjugate deviation of the eyes to the right; and the *post mortem* examination showed partial destruction of the external frontal convolutions of the ascending parietal and frontal convolutions, and of the angular gyrus, with total destruction of the supramarginal gyrus (?) (*lobule du pli courte*).

2. *Sturge on a Case of Malformation of the Arm.*—Dr. W. Allen Sturge (*Path. Trans.*, 1880) describes a man, the greater part of whose left fore-arm and hand were absent, as the result of congenital malformation. His mother stated that when pregnant she was frightened by a man who had lost one arm, and who ran after her in a wood. The patient was in all other respects well made. The fore-arm ended in a conical stump, about three inches below the elbow; it contained both radius and ulna. Over the end of the radius the skin formed a small conical projection; and on the flexor aspect there were five small papillæ, varying in size from a pea to a large pin's head, passing transversely from the radial to the ulnar side, of which the two largest carried well-marked nails. The muscles of the upper arm were smaller, and the humerus an inch shorter than on the other side. Dr. Sturge suggests that amputation *in utero* is probably quite an exceptional cause for these malformations, which are more likely due to a primary abnormal condition of the ovum, or to local disease during development.

3. *Leube and Fleischer on Leukæmia.* Professor W. Leube and Dr. R. Fleischer (Virchow's *Archiv*, Band lxxxiii, Heft 1) publish the case of a strong and healthy woman who developed in four months, after a normal confinement, all the symptoms of rapidly advancing anæmia: diminution of strength and nutrition, vertigo, headache, loss of appetite; at the same time pain and swelling occurred in the left lower extremity, which disappeared only after some time. Five weeks later, examination showed only extreme anæmia, with blowing murmurs over the heart and a small, easily compressible pulse; no obvious enlargement of liver, spleen, or lymphatic glands. The number of the red corpuscles was notably diminished; that of the white corpuscles was absolutely and relatively greatly increased. The left tibia and tarsus were painful on pressure. The left leg was amputated above the knee for rapidly spreading gangrene. The patient died six days later. The necropsy showed intense anæmia of all the internal organs; advanced degeneration of the heart's muscle; no changes of the liver, spleen, or lymphatic glands; a chronic gastric ulcer. Red hyperplastic marrow was found in the bones, with numerous nucleated red blood-corpuscles (transition forms) and numerous marrow-cells. This lymphoid red process in the marrow has been found by Neumann and others in various cachectic conditions, and is regarded as being the consequence of the anæmia. They conclude that either this process must occasionally and exceptionally give rise to a great development of white corpuscles as in this case, or it must be admitted that the source of the leukæmia cannot always be discovered in the usually recognised blood-forming organs, but that the disease must be regarded as an independent blood-disorder.

4. *Fitz on a Case of Diabetic Coma.*—Dr. R. H. Fitz (*Boston Med. and Surg. Journal*, Feb. 10th, 1881) reports the case of a patient dying comatose after a few weeks' illness. At the necropsy the head was not opened; the blood had a peculiar sour odour, and subsequent examination proved it to contain a large quantity of fat, fatty granular corpuscles, and acetone; a small number of fat embola were found in the lungs, but the examination of the organs was otherwise negative; the bladder contained urine, which, on testing, gave the reactions of sugar.

5. *Martin on the Pathology of Tuberculosis.*—M. Martin (*Gaz. Méd. de Paris*, Jan. 22, 1881) has found that although it is true that indifferent substances may give rise to tubercular eruptions, identical in their histological characters with genuine tuberculosis, yet the tubercle of tuberculosis possessed the property of infection, whereas the pseudo-tubercle did not. Moreover, the true tubercle became more virulent with every repetition of inoculation on a fresh subject, while the pseudo-tubercle never produced more than local lesions, which did not extend to the neighbouring vessels and lymphatic glands; while even this local infective power died out, when successive inoculations were made at the third or fourth in the series.

6. *Sassecky on Idiopathic Hypertrophy and Dilatation of the Heart.*—M. Sassecky (*Petersburger Med. Woch.*, 1880, No. 33) relates that, out of a litter of four young cats, two were daily hunted round a large room for one and a half to two hours for half a year, when all were killed. The body-weight of the two which had been hunted had increased much less than the others. The hearts of the hunted cats were 5 to 9 millimètres (0.2 to 0.36 inch) longer, but scarcely broader, and weighed less (about 0.04 per cent.); the wall of the right ventricle was about half a millimètre to a millimètre thicker, that of the left, on the contrary, about 1.5 millimètre (0.06 inch) thinner. The auricular walls were in a similar state. The breadth of the aorta at its origin from the heart was 2 to 2.5 millimètres (0.08 to 0.1 inch) greater in the hunted cats; the pulmonary artery showed no difference. The muscular fibres of the left auricle and ventricle were on the average smaller than those on the right side. The lungs and liver and spleen were somewhat smaller. Weighing the liver, kidneys, stomach, and intestines, gave no result. These appearances are explained by the author as being due to atrophy having succeeded to the primary hypertrophy of the left side of the heart; then the right side hypertrophied, but, at the time the dissection was made, atrophy had not commenced there.

7. *Rank on Poliomyelitis Anterior Acuta Adultorum.*—C. Rank (*Deutsches Archiv für Klin. Med.*, Band xxvii, s. 129) publishes the following case. After getting wet through and chilled, a healthy young man was seized with fever, and intense lumbar pain and headache. The next day, there were complete paraplegia of the legs, and incontinence of urine. Both legs wasted, the left more than the right. Sensation was lost, also the left patellar reflex; sight was treble. On the right, both faradic and galvanic irritability were diminished; on the left, with the exception of the sartorius and adductors, faradic irritability was quite lost, and the galvanic irritability was diminished with the qualitative change known as reaction of degeneration (*Entartungsreaction*). After eight weeks of electrical and hydrotherapeutic treatment, the patient was discharged cured. A second man, aged 31, also fell ill after a severe chill, with fever and lightning-like spasms in the muscles of the legs, which next day were paralysed. There was no bed-sore, sensibility was intact. Both legs became very thin; under the use of baths and electricity, the left leg recovered in ten weeks; the right in nine months. The patellar reflex was feeble on the left, and quite gone on the right; the left showed diminished faradic and galvanic excitability; the right showed decided reaction of degeneration.

8. *Knoll on Myocarditis and the other Results of Section of the Vagus in Pigeons.*—Dr. Knoll (*Separat-*

abdruck aus der Zeitschrift für Heilk., 1880, p. 1) has found, that after section of the vagus in pigeons, the bodies show signs of inanition, the lungs, intestines, and the great abdominal veins are engorged with blood, and there are frequent hæmorrhages into the lung tissue and the intestinal mucous membrane. Œdema of the lungs is frequent but not constant, proving, as Welch and Mayer have pointed out, that simple hyperæmia of the lungs does not tend to œdema, except under special conditions. This special condition appeared to be myocarditis, especially affecting the left ventricle, which was present in all these cases. Bilateral section of the vagus did not cause any marked alteration in the sensibility of the laryngeal mucous membrane, the simple reflex movements for preventing the entrance of food into the air-passages persisted, and the fact that particles of food were constantly found in the air-passages of these vagotomised pigeons can only be explained by supposing that the circumstances were so favourable to their entrance, that the ordinary reflex means of exclusion were insufficient. The myocarditis already referred to was found, in a great number of examinations, to be present only in those birds which had been vagotomised. Eichhorst has suggested that the vagus contains trophic fibres for the heart, but this is opposed by the fact that, in more than half the experiments in which the animals lived a relatively long time after the operation, there were no changes of the heart's muscle but those which were due to inanition. Also the absence of chronic changes after unilateral section, and the presence of interstitial growth with secondary muscular atrophy, oppose the assumption that the vagus directly influences the nutrition of the cardiac muscle. But bilateral section acts indirectly by interfering with the nutrition of the myocardium, from inanition; also the great increased frequency of the pulse, the changes in the general circulation, and the dyspnœa, all operate upon the heart, and produce in it structural changes such as we see under analogous conditions in man. Robert Saundby, M.D.

9. *Westcott on a Curious Case of Suffocation.*—Mr. Wynn Westcott, in the *Brit. Med. Jour.*, March 1881, p. 386, reports a very singular case of a plump, healthy-looking child, aged 3 years, suddenly suffocating while eating bread and milk. On the *post mortem* examination the mouth and pharynx were found empty, the heart healthy, and the lungs also healthy, with the exception of a patch of miliary tubercle in the left apex. Several bronchial glands were found enlarged and filled with caseous matter. The œsophagus was empty throughout. On opening the larynx and trachea a soft yellowish mass of the size of a white haricot bean was found impacted in the glottis; and in the upper part of the trachea another similar mass was also found; these consisted of caseous matter discharged from a large ulcerated bronchial gland situated just above the bifurcation of the trachea. Similar softened portions of the caseous gland were found in the bronchi. That so large an amount of disease should have existed, without any physical symptoms, and in a child apparently in good health, was most singular.

R. Neale, M.D.

10. *Meschede on Pathological Changes and the Function of the Olivary Tracts of the Medulla Oblongata.*—The author communicates (*Central. für Nervenheilk.*, 1880, p. 517) two important cases. The first patient was a young man, aged 22, who had been for three years an inmate of an asylum, presenting the symptoms of deep stupor and dementia, and dying of tuberculosis. At first perfectly motionless, with firmly closed lips, and eyes fixed on the ground, he became somewhat more mobile after tartar emetic ointment had been rubbed into his scalp. The dementia remained the same, but he now moved generally in a small circle, and mostly from left to right. He became extremely anæmic and dropsical, and died of tuberculosis. The *post mortem* examination showed tuberculosis in various organs. In the brain, beside obliteration of the posterior horns of both lateral ventricles, there was also a striking asymmetry of the anterior surface of the medulla oblongata. The right olivary body was scarcely visible, and an incision one-third of an inch below the inferior border of the pons Varolii showed that the olivary nucleus of the right side was reduced by a half. In the second patient, a male, aged 38, who suffered from *mélancolie avec stupeur*, passing later into apathetic dementia, the rotatory movement in a definite circular direction was more marked. The head was drawn back by the contraction of the occipital muscles, the face turned upwards, the eyes spasmodically closed, the eyeballs turned to the right, and the pupils widened. Left to himself, the patient turned constantly in the upright position from right to left. There was no reaction to the external world; the skin was anæsthetic, digestion slow, sleep defective. The rotatory movements continued unbroken during his six months' stay in the asylum, the patient resisting any attempt to restrain them. Latterly, the eyeballs turned also from right to left. He died ultimately with the signs of cerebral paralysis. The *post mortem* examination showed distinct atrophy and sclerosis of the left olivary body. In section it was dark in colour and felt-like in consistence, showing also fewer nerve-cells than the right, and these atrophied and infiltrated with yellow pigment granules. Here also both posterior horns of the lateral ventricles were obliterated. The cerebral hemispheres presented the changes of dementia, while those of the cerebellum were normal and relatively large. The author believes, therefore, although not positively asserting, that these rotatory movements were caused, not by alterations in the cerebellum, but in the olivary body; a conclusion supported by the results of vivisection.

11. *Stilling on Primary Cancer of the Bronchia and Tissue of the Lung.*—The analysis of four cases leads the author to believe (Virchow's *Archiv*, Band lxxxiii, p. 77) that primary cancer in the lung commences from the bronchia; and not from their epithelium, or mucous glands, or lymphatic vessels, but from their connective tissue. Having so commenced, the tumours spread along the bronchia and lymphatic vessels. They do not, as a rule, form a close connection with the epithelium and mucous glands of the bronchia, but spread into the alveoli, which are never the primary seat of the affection. Meeting an artery, the disease spreads in the tunica intima, probably along the lymph-channels which exist numerously in it, leaving the epithelioid lining for a comparatively long period intact.

James Anderson, M.D.

12. *Roger and Damaschino on the Histology of Spinal Paralysis of Children and Progressive Muscular Atrophy.* — MM. Roger and Damaschino (*Revue de Méd.*, Feb. 1881) contribute an exhaustive paper on this subject, and from abundant evidence arrive at the following conclusions. 1. The characteristic alteration in infantile paralysis is a spinal

lesion, causing atrophy of nerves and muscles. 2. Its seat is in the anterior part of the grey matter, and it shows itself as softened patches. 3. The softening is of inflammatory origin, and the lesion is, therefore, a myelitis. 4. Progressive muscular atrophy consists essentially in atrophy of the motor-cells, without any patches of inflammatory softening.

George A. Gibson, M.B.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. Braun.—Injuries of the Female Genital Organs in the Non-Pregnant State. (*Deutsche Med. Woch.*, 1880, No. 51.)

2. Cazin. — Varices during Gestation and Labour. (*Arch. de Tocol.*, Feb. 1881.)

3. Frommel.—Two Cases of Rupture of the Uterus. (*Wiener Med. Woch.*, No. 9.)

4. Halbertsma, H.—The Diagnosis of the Placental Site by Probe-Puncture. (*Cent. für Gynäk.*, March 5, 1881.)

5. Höhnle. — Puerperal Fever. (*Memorabilien*, xxv Jahrgang, Heft 9.)

6. Howitz.—Inversion of the Uterus. (*Cent. für Gynäk.*, March 19, 1881).

7. Martin.—On Vaginal Extirpation of the Uterus. (*Ibid*,, No. 5, 1881.)

8. Simpson, A. R.—On Axis-Traction Forceps. (*Obstetrical Soc. of Edinburgh*, July 21, 1881.)

9. Tauszky, Rudolf.—The Causes and Treatment of Metrorrhagia and Menorrhagia. (*Amer. Jour. of the Med. Sciences*, Jan. 1881.)

10. Thévenot, A.—Double Velamentous Insertion of the Umbilical Cord in Twin Pregnancy. (*Annales de Gynéc.*, March 1881.)

11. Sänger.—The Question of Antiseptic Funis Bandage. (*Cent. für Gynäk.*, March 19, 1881.)

12. Willett, E. M. — Rupture of the Uterus: Gastrotomy. (*Mississippi Valley Med. Monthly*, Jan. 1881.)

13. Lwoff.—Subcutaneous Emphysema occurring during Labour. (*Med. Vestnik*, No. 34.)

4. *Halbertsma on the Diagnosis of the Placental Site by Probe Puncture.*—The author remarks that one of the chief dangers in the Cæsarian section is the insertion of the placenta on the anterior wall of the uterus. The introduction of a probe-trocar detects the placental site. When the placenta is found to be on the anterior wall of the uterus, it may be avoided in Cæsarian section by incising the uterus on one side as far away as possible. Dr. Halbertsma is of opinion that, if the placental site can thus always be diagnosed, Cæsarian section will lose one of its chief dangers, and supersede Porro's operation.

8. *Simpson on Axis-Traction Forceps.*—Professor Simpson has adapted traction-rods, fixed to a cross-bar like that of Tarnier, to his forceps. He maintains that the perineal curve, which Tarnier insisted upon when he first introduced his forceps, is useless, and states that Tarnier himself now discards it. Professor Simpson, however, retains the perineal curve in the tractors.

9. *Tauszky on Metrorrhagia and Menorrhagia.*—The author concludes an exhaustive paper with the following remarks. In the treatment of menorrhagia, metrorrhagia, or chronic pelvic congestions and hyperæmic conditions, rest, with the pelvis elevated, is of the highest importance. Hot-water injections, and scarifications of the cervix and endometrium, are beneficial. Salicylate of soda, quinia, digitalis in large doses, and opium, for the relief of pain and where a nerve-sedative is indicated, are invaluable means of arresting uterine hæmorrhages. Ergotin, in large doses, given before, during, and after menstruation, every hour, until the hæmorrhage, if profuse, ceases, is one of the most valuable aids in arresting it. The use of intravaginal balls of the astringents, alum, tannin, and tincture of iron, preferably four grains of alum, with a few drops of iron and glycerine, introduced every hour if the hæmorrhage be alarming, or, still better, the careful intra-uterine application, down to the fundus, of tannin and glycerine on a probe, or a solution of persulphate of iron, half diluted in water, have, in Dr. Tauszky's hands, checked uterine hæmorrhages that had resisted treatment for months. He has never seen any ill effects follow the intra-uterine application of iron in a large number of cases of obstinate metrorrhagia in his own practice. Cauterisations in catarrhal endometritis, five or six days after the menstruation has ceased, repeated once a week, effected the contraction of the enlarged womb and its blood-vessels, and cured the catarrh. Intra-uterine applications should never be used where there is an obstruction or a contraction at the internal os, or in any part of the cervical or uterine canal. Flexions must be straightened by the careful use of the sound, or an anteflexion, and, if adhesions be present, by Bozeman's method of tamponing the vagina. These tampons act by supporting the parts upon a gentle cushion of cotton, relieving thereby the hyperæmia of the uterine and ovarian blood-vessels. In submucous and intramural fibroids, Hildebrandt's method of hypodermically injecting ergotine daily, often for months, has frequently checked long-continued metrorrhagia. In cases of carcinoma or rodent ulcer, fungosities, polypi, granulations, the curette, and the application of Monsell's solution of iron, have arrested uterine hæmorhage. Dr. Tauszky often applies the pure powder of the subsulphate of iron to the cervix, or a concentrated solution of alum, if the bleeding take place from an eroded cervix. He also occasionally applies to the endometrium fuming nitric acid, or the hot iron, a few days after menstruation, without producing other than good results, but only in exceptionally rare and obstinate cases. Compressing the abdominal aorta, for the purpose of checking excessive uterine hæmorrhage, has also, in Dr. Tauszky's hands, proved a valuable method in three instances, where all other means had failed, and the patients almost moribund.

12. *Willett on Rupture of the Uterus.*—On March 20th, 1865, Mrs. B., aged 21, was taken in labour. At 4 A.M., Dr. Frayser, the partner of Dr. Willett, was called to her. He made an examination, and returned at 9 A.M. with Dr. Willett, when they found the patient somewhat restless and disturbed in mind. She had vomited freely, and had not had a labour-pain for half an hour. The blood in the vagina, the recession of the head, the absence of labour-pains, and the irregular surface of the abdomen, through the walls of which an elbow could be distinctly felt, made the diagnosis of rupture of the uterus absolutely certain. After consultation, they decided to perform laparotomy. Two hours and a-half after the rupture occurred, Dr. Willett, assisted by Drs. Frayser and Grant, commenced the operation by making an incision through the abdominal wall in the median line. The incision extended from below the umbilicus to within an inch of the pubes; but, as this did not give sufficient room, it was extended upwards,

and to the left of the umbilicus. The child and the placenta were found expelled from the uterus into the abdominal cavity. After removing the child and placenta, the blood and amniotic fluid were carefully sponged out, and the abdominal wound closed by interrupted sutures through the peritoneum. The wound had entirely united by April 3rd. The vaginal discharge was free, and very offensive. Diluted solution of chlorinated soda, alternated with permanganate of potash, was used as a vaginal injection. The patient completely recovered in a few weeks. The patient is now alive and well, nearly fifteen years after the operation. Her husband died, and she remained a widow for four or five years, and then married again. Menstruation is regular, but conception has not occurred again, although her husband is a vigorous man, the father of a number of children. This case was performed at a time when the Lister method was unknown to Dr. Willett.

FANCOURT BARNES, M.D.

13. *Lwoff on Subcutaneous Emphysema occurring during Labour.*—Dr. Lwoff (*Meditz. Vestnik*, 1880, No. 34) reports the case of a primipara—a strong, healthy young woman—who was delivered of a healthy child after a natural labour; but towards the first stage her face became puffed, her neck swollen, and the face grew cyanotic. On examination, the parts were distinctly crepitant, the emphysema extending to the insertion of the platysma above, and below as far as the third rib; behind it did not extend beyond the anterior borders of the trapezii. She complained of sore throat, slight cough, and difficulty in swallowing. Percussion of the chest was normal; the breathing at the apices was a little harsh; respiration, at first 32, fell to 20; no dyspnœa. The appearances began to subside in three days, and had left no traces in a week. The patient made a good recovery. Dr. Haupt reports a similar case, where the emphysema was limited to the same region, in the *New York Med. Record* for Dec. 18th.

ROBERT SAUNDBY, M.D.

SYPHILOGRAPHY.

RECENT PAPERS.

1. KROWCZYNSKI.—On the Expectant Treatment of Syphilis. (*Vierteljahres. für Dermat. und Syphilis*, 1880, 2 and 3 Heft, p. 211.)

2. AUSPITZ.—On Excision of the Syphilitic Initial Sclerosis. (*Ibid.*, p. 281.)

3. MAURIAC.—On Precocious Syphilitic Affections of the Subcutaneous Cellular Tissue. (*Annales de Derm. et de Syph.*, 1880, Nos. 3, 4.)

4. REY.—Syphilis according to Race and Climate. (*Ibid.*, No. 4, p. 662.)

5. TERRILLON.—The Treatment of Syphilis by Subcutaneous Injection of Mercurial Solutions. (*Bull. et Mém. de la Soc. de Chir.*, 1880, Nov. 5, p. 534.)

6. WEISS.—The Microscopic Organisms of Gonorrhœal Pus. (*Thèse de Nancy*, 1880; and *Gaz. Hebdom.*, Nov. 12.)

7. ALLEN.—Syphiloma of the Spinal Dura Mater. (*Austral. Med. Jour.*, 1880, Nov., p. 508.)

8. GOUGUENHEIM.—Affections of the Larynx in Secondary Syphilis. (*Le Progrès Med.*, 1880, Dec. 4.)

9. VAJDA.—The Treatment of Gonorrhœa by Irrigation of the Urethra. (*Wiener Med. Presse*, 1880, Nos. 39, 41, 42.)

10. BARTHÉLEMY.—Syphilitic Chancre of the Anterior Pillar of the Fauces. (*Annales des Mal. de l'Oreille, du Larynx, etc.*, 1880, Dec. 31, p. 316.)

11. RASUMOFF.—On Chancre of the Vaginal Portion of the Uterus. (*Vierteljahres. für Dermat. und Syphilis*, 1880, Heft 4, p. 517.)

12. DESPRÉS.—Inoculation of Syphilis by the Razor. (*Jour. des Connaissances Méd.*, 1880, No. 49.)

13. FENGER AND HINDE.—The Endoscope in the Local Treatment of Chronic Gonorrhœa, etc. (*Chicago Med. Rev.*, 1880, No. 11.)

14. GOWERS.—Syphilis and Locomotor Ataxy. (*Lancet*, 1881, Jan. 15.)

15. WARNER.—Cases of Congenital Syphilis. (*Ibid.*, Jan. 29)

16. MAUGHS.—Is Secondary Syphilis communicable as such? (*St. Louis Med. and Surg. Jour.*, Jan. 1881.)

17. GOSSELIN.—Gonorrhœal Arthritis of the Knee: Ankylosis. (*Gaz. des Hôp.*, 1881, No. 17.)

18. SABADINI.—The Treatment of Gonorrhœal Orchitis. (*Ibid.*, No. 18)

19. FOURNIER.—Ulcerating Syphilides of the Genitals. (*Ibid.*, No. 23.)

20. FOURNIER.—A case of Pott's Disease of Syphilitic Origin. (*Annales de Dermat. et de Syph.*, 1881, No. 1.)

21. LELOIR.—Destruction of the Chancre as an Abortive Measure in Syphilis. (*Ibid.*)

22. DANA.—On the Benignity of Syphilis: being a Study of the Disease, especially as it affects Seamen. (*New York Med. Record*, 1881, No. 6.)

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3. *Mauriac on Precocious Syphilitic Affections of the Subcutaneous Cellular Tissue.*—M. Mauriac begins a series of papers (*Annales de Derm. et de Syph.*, 1880, No. 3, p. 419) bearing the above title, with the remark that, 'it is not yet admitted in syphilitic pathology that lesions directly connected with the constitutional disease may develop in the subcutaneous or submucous cellular tissue, immediately after the evolution of the chancre, or at least during the first stage of the intoxication'. The author arranges his cases in several series; the first comprising those in which the syphilitic neoplasm is diffused, confluent in certain places, and presents the general characters of the exanthems. In this series four cases are described at length, and the author proposes for lesions of this kind the name of 'syphilitic erythema nodosum', from the great resemblance of the syphilitic patches to those of common erythema nodosum. Case 1.—A woman, aged 38. Four and a-half months after contagion, constitutional disturbance, and a confluent papular syphilide. At the same time, on the body and limbs, subcutaneous nodules, and hyperplasic patches, some being adherent to the derma. The patches had the appearance of erythema nodosum. Cure under mercury and iodide. Papules and neoplasms afterwards returned. Later, iritis, cephalagia, etc. Subsidence under treatment. Case 2.—On the fiftieth day after appearance of initial lesion, syphilitic fever, headache, etc., came on. About the same time, periosteal swellings on cranium; then, a papular syphilide, and patches like erythema nodosum. Rapid disappearance under mercury and iodide. At the seventh month, another severe attack of papules. Case 3.—At ninth month of a severe case of syphilis, periosteal swellings on legs, and patches like erythema nodosum, on upper and lower extremities, but without subcutaneous nodules. Rapid cure under treatment. Case 4.—Sixty-five days after appearance of initial lesion, subcutaneous nodules, which presently became adherent to the skin, and then had the appearance of erythema nodosum. Disappearance of the skin-affection, as well as of other syphilitic lesions, under treatment. The second series of observations (*Ibid.*, No. 4, p. 645) is headed 'Circumscribed and resolutive neoplasms of the subcutaneous cellular tissue'. Of these, M.

Mauriac gives eleven cases, of which the following is a brief summary. Case 5.—Syphilis with mild secondaries. Mercury. In the thirteenth month of the disease, diffused infiltration of the floor of the mouth. Rapid cure under iodide. Tubercular phthisis eight years later. Case 6.—Also a case of diffused infiltration of the floor of the mouth, but appearing in this instance only four months after the initial lesion. Periostosis of lower jaw. Roseola. Mucous patches, etc. Cure in a month under mixed treatment. Case 7.—In the fourth month of syphilis, subcutaneous nodule in right parotid region. Afterwards, diffused hyperplasia of nearly whole parotid region. Disappeared in a month under mercury and iodide. Case 8.—Node on forehead in second month after initial lesion appeared. Patient lost sight of. Case 9.—Subcutaneous nodules, one on forearm, the other on arm, about the sixth month of syphilis. Case 10.—Symmetrical nodules of internal surface of thighs, appearing about same time as roseola. Case 11.—Subcutaneous swelling at inner side of right thigh appeared at the seventh month of a mild course of syphilis. Disappeared in twenty days. Case 12.—In fourth month of a severe attack of syphilis a subcutaneous tumour in left popliteal space; also myositis of internal head of gastrocnemius. Cure in a month under mixed treatment and rest. Case 13.—Periosteal swellings of both tibiæ at fourth month of syphilis; also two patches of infiltration of the skin. Cure under mixed treatment in forty days; but while these affections were disappearing, impetigo and syphilitic epididymitis appeared. Case 14.—Initial lesion followed in six weeks by roseola and two small gummata of right leg. Rapid diminution under mercury. Cure in a fortnight. Case 15.—Subcutaneous gumma at apex of Scarpa's triangle sixty-eight days after appearance of initial lesion. Disappeared in a month. In the eighth month a gummy tumour of left sterno-mastoid. Rapid cure. With regard to the foregoing cases, the author remarks that they are sufficiently numerous and varied to place their specific nature beyond doubt. The diagnosis is easy. The prognosis is favourable. The tumours are promptly got rid of by mercury and iodide of potassium. Indeed, M. Mauriac thinks they would soon disappear spontaneously.

5. *Terrillon on the Treatment of Syphilis by the Subcutaneous Injection of Mercurial Solutions.*—M. Terrillon records (*Bull. et Mém. de la Soc. de Chir.*, 1880, p. 534) the results of experiments made at the Lourcine Hospital with the solution of peptonised mercury recommended by Bamberger. The solution is made as follows. Take a 5 per cent. solution of corrosive sublimate in distilled water, and a solution of chloride of sodium (18 to 20 per cent.) also in distilled water. Dissolve one gramme (15 grains) of flesh peptone in 50 cubic centimètres of distilled water, and filter. To the filtrate add 20 cubic centimètres of the sublimate solution, and afterwards a quantity of the sodium solution (about 15 or 16 cubic centimètres) sufficient to dissolve the precipitate. Pour into a graduated cylindrical vessel, and add distilled water until the whole measures 100 cubic centimètres. Cover the vessel and let it stand for a few days. A whitish flocculent precipitate will form, and must be separated by filtration. The solution will then keep clear for at least three months, and is not precipitated by heat, acids, or alkalies. With this solution M. Terrillon has made 487 injections of 1 cubic centimètre each, containing 1 centigramme (about 1-6th grain) of peptonised mercury; and 88 injections of about half that quantity. A Pravaz's syringe with vulcanite mounts was used. The dorsal region was preferred for the site of the injection, which was performed slowly, and the diffusion of the solution was assisted by slight kneading with the finger. In no case did abscess occur. The larger dose sometimes caused more or less prolonged pain about the seat of injection; and in one case, after a large number of injections, partial anæsthesia followed. The smaller dose never caused pain or other inconvenience. Salivation was produced in several cases after four or five injections of 1 centigramme repeated daily; and examination of the urine some hours after the injection showed the presence of mercury in it. M. Terrillon reserves his report of the therapeutic action of this mode of treatment for a future occasion, as the patients have not yet been sufficiently long under treatment for a trustworthy conclusion to be arrived at.

6. *Weiss on the Microscopic Organism of Gonorrhœal Pus.*—Dr. F. Weiss, following up the researches of Neisser on this subject, describes (*Thèse de Nancy*, 1880, and *Gaz. Hebdom.*, Nov. 12, 1880) a micrococcus which he considers to be peculiar to gonorrhœal pus. Under a high magnifying power, after the addition of a solution of violet of methyle, Dr. Weiss found certain small bodies stained of a deep violet colour, spherical in form, and surrounded by a hyaline envelope. These small bodies were rarely isolated, sometimes in groups of two, three, or four together, but most often there were five or seven in a group. Occasionally, however, they formed considerable agglomerations. The bodies, when coloured by the violet methyl, were not mobile. The author examined the pus of twenty-three women and of nine men who were suffering from gonorrhœal vaginitis and urethritis respectively. In all these instances the above-mentioned bodies were found without exception. The author then examined the pus of simple urethritis, balano-posthitis, soft chancre, syphilitic chancre, bubo, vaginal leucorrhœa, and suppurative arthritis of the knee; but never discovered the organism in the pus from any of these various sources. Dr. Weiss, therefore, concludes that the peculiar virulence of gonorrhœal pus is due to the presence of these bodies, and recommends the frequent injection of a solution of permanganate of potash as the best mode of treatment.

10. *Barthélemy on a case of Chancre of the Anterior Pillar of the Fauces.*—A man, aged 28, applied at the Hôpital St. Louis, in Oct. 1880, to be treated for a sore throat (*Annales des Mal. de l'Oreille, du Larynx, etc.*, Dec. 31, 1880). On examination, the right side of the throat was healthy. The left tonsil was red and swollen, and on the left anterior pillar was an erosion, with a clearly indurated base. Below the angle of the jaw was a very hard gland, as large as a walnut; there was also a chain of enlarged glands, reaching down to the supraclavicular space. The patient denied all knowledge of contagion. The lesion healed in about a fortnight. Roseola, and papulo-erosive syphilides of the lips and tongue followed.

11. *Rasumoff on Chancre of the Cervix Uteri.*—Dr. Rasumoff of Moscow states (*Vierteljahres. für Derm. und Syphilis*, 1880, Heft. 4 p. 517) that he saw, during four years among the prostitutes at the Mjasnitzkischen Hospital, in that city, 1,374 chancres of the genital organs and their neighbourhood. Among these were 117 chancres of the cervix uteri, of which thirteen were hard, and followed by general syphilis. The author thinks that chancres of

the cervix are not so rare as they are generally considered to be. He considers that the comparative unfrequency of primary syphilitic sores (about 1 in 100, according to the numbers given above) in this situation entirely owing to the protected position of the organ, and not to any capacity of its tissue for resisting the action of the virus.

12. *Després on the Inoculation of Syphilis by Razors.*—M. Després has lately observed two cases of syphilis, in which the initial lesion was on the face, and in which contagion was supposed to have occurred during shaving. Case 1.—D., aged 54, of sober habits, having never had any venereal disease, was shaved by a barber on July 11, 1880. On leaving the shop, the man noticed that he had three cuts on his chin. On the 14th, he was again shaved, and the sore places bled during operation. On July 25, the patient (having had nothing to do with women for ten weeks) noticed some swelling about the site of each cut, and applied a poultice. On September 1, he came under the care of M. Després, having been sent to him as a case of cancer. There were at that time three ulcers on the chin, surrounded by some red and rather hard papules. The ulcers were not painful. There was a hard gland beneath the jaw, but no further signs of syphilis about the body. On September 15, a general papular syphilide appeared, and was followed by mucous patches, etc. The second case was that of a man, aged 22, who came to Paris in May 1880, having had no sexual intercourse for about two months. There was no history of any venereal disease. During his stay in Paris he was shaved by a barber every other day, but did not remember having been cut by the razor. About July 12, a little scab appeared in the furrow between the chin and upper lip. Beneath the scab was a sore with hard borders, and soon afterwards the patient noticed a lump beneath the chin. About August 10, M. Després saw the man, and diagnosed syphilis. On August 19, roseola appeared, and, shortly afterwards, mucous patches of the throat and anus.

13. *Fenger and Hinde on the Endoscope in Chronic Gonorrhœa, etc.*—Drs. Fenger and Hinde of Chicago recommend (*Chicago Med. Rev.*, Dec. 5, 1880) the use of the endoscope in cases of gleet. The apparatus used by the authors consists of a silver tube, from thirteen to eighteen centimètres long, funnel-shaped at its outer end, but cylindrical throughout the remainder of its length, and of an uniform diameter of six or seven millimètres. The light is obtained from a kerosine lamp, and the urethra is illuminated by means of the ordinary frontal mirror. Several cases are reported in which sulphate of copper was applied to thickened and granular patches of the urethra, through the endoscopic tube, with good effect.

18. *Sabadini on the Treatment of Orchitis.*—Dr. Sabadini of Constantinople, following the plan of treatment advocated by Dr. Bourdeaux (*Gaz. des Hôp.*, 1881, No. 18), applied an ointment, composed of one part of iodoform and ten parts of vaseline, with success in a case of gonorrhœal orchitis. The pain rapidly ceased, and the swelling disappeared in eight days.

20. *Fournier on a case of Pott's Disease of Syphilitic Origin.*—M. Fournier reports in full detail (*Annales de Derm. et de Syphil.*, No. 1, 1881, p. 19) a case of syphilitic disease of the spine, with a coloured plate showing the condition of the affected vertebræ. A coachman, aged 56, was admitted into the St. Louis Hospital in July 1876, having a history of venereal disease in his youth, but no distinct history of syphilis. The patient stated that he had always enjoyed good health until a few months before admission, when his health began to fail. His appetite fell off, and he began to suffer from pain in the loins, which became continuous, and gradually extended down the legs. On examination, nothing wrong could be discovered about the spine, but he had a well-marked syphilitic sarcocele, numerous subcutaneous and muscular gummata, gummy ulceration of one great toe, and marked atrophy of the gluteal muscles. Under specific treatment the sarcocele diminished and the ulceration of the toe healed, but the general health became worse. Ascites and pleural effusion supervened, and the man died in October. *Necropsy.*—Numerous pleuritic adhesions and circumscribed effusions were found. At the apices of the lungs were some hard, black nodules, varying from the size of a pin's head to that of a cherry-stone. Some of the nodules contained a yellowish, chalky substance. The pericardium was adherent; the heart healthy. There were ascites, general adhesions of the intestines, and false membranes of the peritoneum. The liver was smaller than normal, and adherent to the diaphragm and to the neighbouring viscera. Its surface was even; its tissue hard and cirrhosed; its spleen was normal. On the surface of both kidneys were some radiating depressions of cicatricial appearance, corresponding to superficial sclerosis of the renal tissue. There was a gummy deposit in the left testis; also gummy tumours of various muscles of the trunk and limbs. There was a double psoas abscess; the fourth lumbar vertebra was denuded. The dura mater and the sheaths of the lumbar nerves were thickened. The other membranes of the cord were healthy. Examination of the left half of the lumbar spine, after antero-posterior section, showed that the bodies of the third and fourth vertebræ were, in their posterior half, infiltrated by a yellow caseous material. The lower zone of the third, and the upper zone of the fourth vertebræ, were the parts specially affected. The posterior three-fourths of the intervertebral substance had also been destroyed, and in its place was a cavity filled with purulent fluid. The intervertebral substance between the fourth and fifth vertebræ was softened and infiltrated with pus in its posterior portion. The body of the third vertebra contained a cavity. Under the microscope, the third, fourth, and fifth vertebræ showed the typical appearances of condensing osteitis with purulent and caseous infiltration, as is seen in gummy osteomata. The intervertebral foramina and the nerves were examined by M. Hayem, who reported as follows. The fourth lumbar nerve, at its exit from the foramen, was invaded by a gummy growth. At the same spot it was united with another gummy formation, which, in all probability, originally developed in the periosteum of the corresponding vertebra. Above the gumma, the nerve was the seat of interstitial neuritis, with partial atrophy of the nerve-tubules. The intervertebral ganglion of the nerve was the seat of interstitial irritation from pressure, accompanied by atrophy of the nerve-elements. The third and fifth lumbar nerves were only affected to a less degree. They presented simply the changes of chronic interstitial irritation, without decided alteration of the nerve-elements.

21. *Leloir on Destruction of the Chancre as an Abortive Measure in Syphilis.*—M. Henri Leloir, in a long and valuable paper (*Annales de Derm. et de Syphil.*, No. 1, 1880, p. 69) reviews and criticises very fully the different experiments that have been made on

the excision and destruction by other means of the initial lesion of syphilis, with the view of preventing further development of the disease. The author also adds a very complete bibliography of the subject. The oft-quoted experiments of Auspitz and Unna, Kölliker, and others, are noticed, and their weak points are well brought out; the result being to show how little evidence there is, up to the present time, that general syphilis can be prevented, or even rendered milder in its course, by the destruction of the initial manifestation. M. Leloir concludes his paper with a brief account of a personal interview which he had with Ricord on the subject. This portion of the paper is particularly interesting, as it gives M. Ricord's matured opinion, and shows how entirely he has abandoned his former conviction, viz., that the destruction of the primary sore, within a short period of its existence, could prevent the sequence of general syphilis. Ricord now says 'that he has completely abandoned the practice of cauterising or of excising infecting chancres; that he considers the destruction of the infecting chancre to be absolutely useless at any period; as soon as it appears, before its appearance even, syphilis exists. If the penis were amputated on the appearance of the infecting chancre, syphilis would none the less be produced.' ARTHUR COOPER.

OPHTHALMOLOGY.

RECENT PAPERS.

1. PARENT.—On a New Form of Ophthalmoscope. (*Recueil d'Ophthalmologie*, September 1880.)
2. CUIGNET.—Fatty Degeneration of the Cornea. (*Ibid.*, November 1880.)
3. GALEZOWSKI.—On Zonular Cataract. (*Ibid.*, Nov. 1880.)
4. LANDOLT.—On a New Method of Blepharoplasty. (*Archives d'Ophthalmologie*, Dec. 1880.)
5. DIANOUX.—On Treatment of Detachment of the Retina. (*Ibid.*, Dec. 1880.)
7. PANAS.—On Paralysis of the Sixth Nerve. (*Archives d'Ophthalmologie*, Dec. 1880.)
8. CHARPENTIER.—On the Sense of Light and the the Sense of Colour. (*Ibid.*, Dec. 1880.)
9. MANFREDI and COEFLER.—On Ocular Tuberculosis. (*Ophthalmological Congress of Milan*, 1880.)
10. BADAL.—Studies in Physiological Optics: the Visual Angle. (*Archives d'Ophthalmologie*, Dec. 1880.)
11. DESFOSSES, L.—Transparent Cysts of the Eyelids. (*Ibid.*, Dec. 1880.)
12. FIALKOWSKY.—On Scorbutic Diseases of the Eye. (*Centralblatt für Praktische Augenheilkunde*, Aug. 1880.)
13. LJUBINSKY.—On the Effect of the Jablotschkow Electric Light upon Accommodation. (*St. Petersburger Med. Woch.*, Sept. 1880.)
14. SEELY.—On the Astringent and Caustic Treatment of Superficial Inflammations of the Eye. (*Klin. Monatsblätter für Augenheilkunde*, Nov. 1880.)
15. KEYER.—On a Case of Total Symblepharon of Upper and Lower Eyelids in both Eyes, with Restoration of Sight by Operation. (*Klin. Monatsblätter für Augen.*, Nov. 1880.)

1. *Parent on a New Form of Ophthalmoscope.*—The chief features in this ophthalmoscope are the rearrangement of the series of lenses behind the mirror, and the addition of cylindrical glasses for the measurement of astigmatism. The + lenses are 8 millimètres in diameter, and range from 1 to 10 D, 7 and 9 D being omitted, and are placed in a distinct disc. The − glasses range from 1 to 20 D, with a few omissions, and are also placed in a separate disc. These lenses are 6 millimètres in diameter, and can be combined with +.50 D. With the disc containing the + glasses, hypermetropic cases can be examined; with the − glasses, myopic; without forming any combinations. The mirrors are two in number; one of 6 centimètres, and one of 8 centimètres focal length. The astigmatic glasses are contained in a third disc, and range from −.5 D to − 5 D, in combination with + 6. This instrument is made by Roulot of Paris, and costs, complete, 60 francs.

2. *Cuignet on Fatty Degeneration of the Cornea.*—Dr. Cuignet of Lille (*Recueil d'Ophthalmologie*, Nov. 1880) describes a form of parenchymatous fatty keratitis, which, he believes, has hitherto escaped the notice of ophthalmologists. He narrates six cases of this affection, which he first noticed in Algiers, but subsequently recognised in Europe. It consists of white calcareous-looking patches on the cornea, which at times, however, may be yellow or grey, and present a smooth lustrous appearance. Their usual seat is the centre of the cornea, over which they gradually extend transversely. They commence by a small granular patch, which becomes gradually larger by the aggregation of neighbouring patches. Their seat is directly under the epithelium in the substance of the cornea propria, within which they slowly increase in size and thickness. The first formed patch is generally the most superficial; those formed later, both lie deeper and have a different tint. Vessels, which have their origin in either the external or the internal *cul-de-sac* of the conjunctiva, penetrate these patches, and at times give them a dark red pannus-like appearance. Together with these corneal changes there exist, as a rule, alterations in the ocular, palpebral, and ciliary conjunctiva. The affection is, as a rule, chronic; in one case, however, the author saw it assume decidedly acute symptoms. The most constant and best marked symptom is the impairment of vision, which, if the fatty patch occupy the whole of the pupil, may lead to complete obscuration, the patient having merely perception of light. The seat of the lesions is characteristic, being always near the centre of the cornea, and at a greater or less depth below the epithelium in the cornea proper. It is probable that the disease is incurable, either by treatment or by time, as the author has as yet met with no case in which the deposited matter has been re-absorbed. It remains permanent and innocuous, though in one case iritis was noticed as a complication; and it is probable that other complications, such as a glaucomatous condition, iridochoroiditis, etc., might supervene. Microscopically, the disease consists of a number of minute fatty particles mixed in some cases with crystals of cholestearine, which are gradually and progressively formed in the corneal tissue. Pathologically, it may be compared with the changes which take place within the arteries, and which lead eventually to endarteritis and atheroma. Etiologically, it is probably a manifestation of the strumous diathesis, provoked more immediately by changes in the conjunctiva, which affect the nutrition of the cornea. The differential diagnosis of this affection lies between (1) calcareous or metallic deposits; (2) cretaceous keratitis; (3) and plastic parenchymatous keratitis. The appearances, history, and course, will generally enable it to be recognised. The prognosis is unfavourable, and direct treatment is of little avail. Any causes of irritation in the conjunctiva, lacrymal

passages, cilia, etc., should be removed; and if the opacity be over the pupil, an iridectomy might be performed, and the opacity itself subsequently tatooed.

3. *Galezowski on Diabetic Cataract.*—Dr. Galezowski contributes to the *Recueil d'Ophthalmologie*, August 1880, an interesting paper on diabetic cataract, with the history of five cases of successful extraction. He commences by remarking that diabetic cataracts are of two kinds, viz., those which depend on the presence of sugar in the blood, but more especially in the aqueous humour; and those which, occurring in diabetic subjects, of a certain age, are simple coincidents, and do not stand in the relation of cause and effect. Diabetic cataracts, according to the author, depend on the presence of saccharine matter in the aqueous humour rather than in the blood and tissues, and are more frequently to be met with in plethoric than in thin subjects. As to the consistency of such cataracts, it will vary according as they are simply senile, or are dependent on the presence of glycose, and no hard and fast line can be laid down. From his own researches, he is led to suppose that it is more especially at the posterior segment that diabetic cataracts commence; but they also occasionally arise simultaneously in one or more of the anterior and posterior layers, forming a sort of envelope around a transparent nucleus. As to the prognosis of operation in such cases, it is by no means so desperate as some authors have taught. A very careful opinion must, however, be given as to the amount of sight to be ultimately recovered, seeing that amblyopia, retinitis, atrophy of the papilla, paralysis of the sixth pair, and other complications, occur even more frequently than cataract in diabetic subjects. Thus, in 108 diabetic patients suffering from disturbance of vision, only 37 had cataract. As to the best method of extraction, the author holds that, while for soft cataracts the linear method may be allowed, for the hard, the only proper one is the peripheral flap operation with iridectomy. The author sums up by saying that the existence of glycosuria should not be looked on as in any way a contraindication, so far as an operative interference is concerned; but that in all cases, both before and during the operation, extreme caution and a strictly antidiabetic regimen are necessary.

4. *Landolt on a New Method of Blepharoplasty.*—Dr. Landolt (*Archives d'Ophthalmologie*, Dec. 1880) describes a new operation of blepharoplasty, from which he has obtained good results. For this operation, the eyelids may be considered as formed of two layers superposed, the external consisting of skin and orbicularis, with the eyelashes, the internal of submuscular connective tissue, venous plexuses, tarsal cartilage, and conjunctiva. When these layers are separated in the plane of the forehead, two raw surfaces of considerable extent are obtained, between which a flap, freshened, and from the opposing lid, can be inserted. The upper lid is extremely elastic, and can be drawn down and fixed to the edge of the lower by points of suture. The eye is thus hermetically sealed up, but, after a sufficient time has elapsed, the lid can be cut across, and the palpebral aperture restored. It remains then merely to cover the abraded edges with conjunctiva. Dr. Landolt adds that the operation is indicated chiefly in cases of loss of one lid when its fellow is intact or but little damaged, and in cases in which the two lids are each partially destroyed.

5. *Dianoux on the Treatment of Detachment of the Retina.*—In an interesting paper on the treatment of detached retina, Dr. Dianoux (*Archives d'Ophthalmologie*, Dec. 1880) insists on the therapeutic value of injections of pilocarpine. He publishes a series of eight cases, in seven of which the improvement which followed this course of treatment was remarkable. The first case occurred in a girl aged 21, very myopic, whose left eye was blind, while the right could do little more than distinguish light from darkness. In the right the retina was almost wholly detached, except a small crescentic portion superiorly. Within the first week of treatment the improvement was most marked, and continued to increase during nine months subsequently, until, with − 10 D, vision was = $\frac{1}{10}$ for distance, and for near objects the finest type was legible. The second case occurred in a man aged 34, the sight of whose left eye had been previously lost by a detachment of the retina. The right eye was subsequently affected, and sight was reduced to counting of fingers at two mètres. The inferior and external portion of the field alone remained. Six weeks after treatment vision had improved to $\frac{2}{3}$, and the detachment was limited to the inferior portion of the retina. Within a year vision had become normal; while, although the ophthalmoscope revealed no improvement in the condition of the other eye, vision had in a certain limited degree returned to it. The other cases are in the main similar to the above. In one, however, that of a woman aged 63, the treatment failed completely. In this case, the detachment had existed for three years, and was total, vision being limited to the perception of light. The author, in discussing these results, considers that a series of seven consecutive cases is sufficient to remove all suspicion of a merely fortunate coincidence. In a previous series of thirty detachments, treated by various methods, he had had but one case of cure. The drug acts as a derivative on the eye, probably by means of its action on the salivary, lacrymal, and other glands. Its action is rapid and prolonged, as, in all the cases in which it was beneficial, improvement took place before the tenth injection, and continued for months. The injections should be administered so as to keep the patient as long as possible under their influence. They should be used daily during ten or fifteen consecutive days, followed by a period of rest of ten days. This method should be persevered in, until it is evident that a stationary condition has been arrived at. The injections should be in sufficient doses to cause a copious salivation of at least an hour's duration. In most of his cases, the author commenced with six drops of a solution of twenty centigrammes of nitrate of pilocarpine to four grammes of distilled water (= 5 per cent. solution). The injection should be administered on an empty stomach to avoid vomiting.

7. *Panas on Paralysis of the Sixth Nerve.*—Professor Panas (*Archives d'Ophthalmologie*, Dec. 1880) in this paper gives in detail the history of two cases of paralysis of this nerve from injury, and refers to two others, which he has published elsewhere. He describes and illustrates, by a well-executed woodcut, its anatomical relations, and shows (1) the frequency with which, when looked for, paralysis of this nerve will be found to have occurred in injuries of the skull, and (2) that the seat of the lesion of the nerve will generally be at the spot where it bends round the summit of the petrous portion of the temporal bone.

8. *Charpentier on the Sense of Light and the Sense of Colour.*—Dr. Charpentier details some interesting physiological experiments (*Archives*

d'Ophthalmologie, Dec. 1880) on the perception of light as distinct from that of colour. In these researches he used an instrument devised by himself (figured in Wecker's and Landolt's *Ophthalmologie*, tome 1, p. 530), which enabled him to measure exactly the amount of light required to excite respectively luminous or chromatic sensibility in various portions of the retina. He found that all coloured light, however simple in composition, if gradually augmented above zero, first of all produces a sensation of mere luminosity, and only subsequently one of colour. The chromatic sensation is at first ill-defined, and does not become distinct and definite until the light has assumed a certain intensity, which varies with its nature and the portion of retina affected. The luminous sensation is separated from the chromatic by a larger interval, in proportion as the region of the retina affected is distant from the yellow spot. The sensation of white is due to the neutralisation of two or more chromatic sensations, owing to which neutralisation the sensation of luminosity, which is generally masked, reappears and predominates. A certain quantity of light is lost in overcoming the inertia of the ocular apparatus. This is shown by the fact that, after a sojourn in darkness, a certain minimum intensity of light is required for perception, but this minimum becomes considerably reduced after the retina has been stimulated by previous excitation. On the other hand, the amount of light required to stimulate the chromatic sense remains the same in each case. Chromatic perception is not increased or diminished by the addition of white light; for although in any given case certain coloured rays have been necessarily added, these rays are neutralised by the complementary colour rays existing in white light.

9. *Manfredi and Coefler on Ocular Tuberculosis.*—Manfredi and Coefler relate a case of serous iritis terminating in glaucoma, with complete loss of vision, followed eventually by sympathetic irritation of the other eye. The glaucomatous eye, when examined after removal, showed extensive disease of the choroid, the tissue of which was thickened, especially in the neighbourhood of the papilla. Interstitially, it contained confluent granulations forming small nodosities. Giant-cells were also present in various stages of evolution and softening. The ciliary region of the choroid showed infiltration of lymphoid elements extending as far as the ciliary muscle, the fibres of which were atrophied. They also existed in the ciliary portion of the retina. The pathological conditions displayed in this case the authors have named 'tubercular choroidocyclitis'. The case is unique, for the form, situation, and clinical significance of the giant-cells in this case are totally different from those described by Goldzieher as found in the nerves of the choroid in eyes enucleated for sympathetic ophthalmia.

10. *Badal on the Visual Angle.*—Dr. Badal, in a paper on the visual angle (*Archives d'Ophthalmologie*, Dec. 1880), arrives at certain conclusions respecting the positions of the summit of this angle under various conditions of perception, which differ from those generally received. According to the author, the visual angle is the angle which measures the apparent distance between two points. It is formed by the lines of projection answering to the retinal image of these points, or to the centre of these images, if they are formed by a centre of diffusion. In the case of any two points seen distinctly, the summit of the visual angle lies at the nodal point. In order that two points, situated in two unequally distant places, be seen as apparently equidistant, the eye being motionless, these points must lie on the side of an angle, the summit of which is at the centre of the pupil. When two pairs of points are seen one after the other, the eye accommodating each time for each pair, the summit of the visual angle will in each case lie at the nodal point; but, owing to the displacement of this point with each change of accommodation, the two pairs of points, though seen under equal visual angles, will not be seen under the same. When two points are seen directly by means of a movement of rotation of the eye, the summit of the visual angle will lie at the centre of rotation of the eyeball.

11. *Desfosses on Transparent Cysts of the Eyelids.*—From a careful examination of the transparent cysts which are often found on the free edge of the eyelids, Dr. Desfosses (*Archives d'Ophthalmologie*, Dec. 1880) believes them to be formed from modified sudoriparous glands. He is led to this opinion by the form and arrangement of their epithelium, the presence of a layer of unstriped muscle, and their deep attachments, which seem incompatible with an origin from sebaceous glands. The author's paper is illustrated with some well-executed woodcuts of microscopical preparations. [See London Medical Record, April 1880.] Litton Forbes, M.D.

12. *Fialkowsky on Scorbutic Diseases of the Eye.*—Dr. Fialkowsky contributes an article (*Centralblatt für Praktische Augenheilkunde*, August 1880) founded on observations over a period of two years in the military hospital of Dünaburg (Russia). Affections of the eye from scurvy occurred in the proportion of 3.5 per cent. to other scorbutic diseases. The parts affected were, in order of frequency, the ocular conjunctiva, the subconjunctival cellular tissue, the eyelids, the cornea, and the iris. Dark coloured subconjunctival extravasation of blood was the commonest of these affections. It came about either without apparent exciting cause, or from very trivial causes, *e.g.*, slight pressure, coughing, etc. In the majority of such cases, the pupil was abnormally small and inactive, and the iris hyperæmic and altered in colour, but these changes were not associated with irritative symptoms such as pain, photophobia, or lacrymation. Extravasation into the episcleral tissue occurred less frequently. It was associated with an episcleritis of obstinate character, with pain and tenderness. Keratitis occurred either alone, or in connection with the before-mentioned extravasations. It was always of the diffuse parenchymatous kind, and of long duration. The ultimate result was good. Iritis, with the formation of adhesions, in spite of the use of atropine, occurred occasionally as a complication of the keratitis. The treatment of these affections consisted of good nourishment, vegetables, alcohol, quinine with acids, and lemon-juice internally; atropine and chamomile poultices, with tannin and tincture of opium locally. After inflammatory symptoms had subsided, ointment of vaseline and yellow oxide of mercury was used to promote absorption of the extravasated blood. The scorbutic diseases in general were attributable to imperfect hygiene, bad lodging, heavy work, and insufficient dietary. In the year 1877 an insufficiency of acid in the preserved cabbage, which forms an important part of the soldier's food, was probably an especial cause of scurvy. Early frosts injured the growing cabbages, and interfered with the due formation of acid in the subsequent preserving.

12. *Ljubinsky on the Effect of the Jablotschkow*

Electric Light upon Accommodation.—Electric lighting on the Jablotschkow system having been introduced into a club-house in Kronstadt, complaints of discomfort in the eyes became frequent among frequenters of the reading-room, while in the assembly and ball-room no such complaints were heard. Dr. Ljubinsky investigated the matter at the request of the committee (*St. Petersburger Medicin. Wochenschrift*, Sept. 1880). He attributes the discomfort to irregular action of the ciliary muscles, called forth by the varying intensity of the light. It is well known that when the ciliary muscles contract the pupils contract also, but it has not hitherto been asserted that contraction of the pupils under the stimulus of light induces an associated contraction of the ciliary muscles. In experiments made with gaslight, the intensity of which could be varied at pleasure, it appeared that, if the light were suddenly increased while the eyes were accommodated for the nearest point of distinct vision, this point momentarily approached the eyes to a small extent. [Is it not probable that this apparent approach of the near point was due, in part, at least, to a suppression of diffusion-circles through contraction of the pupils?—*Rep.*]

14. *Seely on the Astringent and Caustic Treatment of Superficial Inflammation of the Eye.*—Dr. Seely (*Klin. Monatsblätter für Augenheilkunde*, Nov. 1880) doubts whether the use of astringent or caustic application is beneficial in inflammation of the conjunctiva. Such treatment is not required even in purulent conjunctivitis; why, then, should it be necessary in the milder inflammations? Dr. Seely has obtained more satisfactory results by the total abandonment of these remedies. Corneal complication rarely follows purulent conjunctivitis in the absence of astringents, if the pus be constantly removed, or otherwise rendered innocuous. Destruction of the injurious character of the discharge, if attainable at all by means of astringents, is so only with difficulty, and with danger to the cornea. Rigorous cleansing, and the use of an ointment of yellow oxide of mercury with vaseline, are the appropriate remedies. In the treatment of corneal complications, and, indeed, in most primary corneal inflammations also, atropine should be replaced by eserine. These methods are the outcome of experience and of septic theories. They are, according to the statement of the author, rational, safe, effectual, and painless.

15. *Keyer on a Case of Total Symblepharon of Upper and Lower Eyelids in both Eyes, with Restoration of Sight, by Operation.*—A man, aged 43 (*Klin. Monatsblätter für Augenheilkunde*, Nov. 1880), was attacked by severe purulent conjunctivitis, and immediately afterwards by inflammation of the lungs, during the course of which the disease of the eyes received little attention. Total symblepharon resulted. He came under treatment eighteen months later. A small aperture remained between the edges of the lids, and through this was visible a thick but loose and extensible membrane, binding the inner surface of the lids to the whole of the surface of the cornea. This membrane was carefully dissected from the cornea, divided into an upper and a lower flap, and turned back so as to line the inner surface of the lids, and there fixed with sutures through the lids. The cornea recovered much of its transparency. For a long while the patient was unable to effect closure of the lids, and had to adopt special measures for the protection of the cornea. Ultimately, the power of closure was completely recovered. Vision was restored to the counting of fingers at ten feet. One eye only was submitted to operation. PRIESTLEY SMITH.

DISEASES OF THE THROAT

RECENT PAPERS.

1. RICHELOT.—Colloid Goître: Extirpation of the Thyroid Gland. (*Ann. des Mal. de l'Oreille, du Larynx*, etc., Dec. 1880.)
2. MARTEL, EUG.—Œdema of the Right Arytenoid Cartilage. (*Ibid.*)
3. BARTHELEMY, M.—Chancre of the Anterior Pillar of the Fauces. (*Ibid.*)
4. KRISHABER, M.—On the Conduct of the Operator in Regard to Foreign Bodies lodged at the Level of the Glottis. (*Ibid.*)
5. BARÉTY, A.—Stridulous Laryngitis or False Croup. (*Ibid.*)
6. STURGE, W. A.—On Ulceration of the Larynx due to Congenital Syphilis. (*Path. Trans.*, 1880.)
7. SCHNITZLER.—The first Endolaryngeal Operation during Anæsthesia. (*Wiener Med. Presse*, 1880, Nos. 48, 49.)

1. *Richelot on Extirpation of the Thyroid Gland.*—Dr. Richelot (*Annales des Malad. de l'Oreille, du Larynx, etc.*, Dec. 1880) reports a case in which he removed this gland for 'colloid goître', associated with dyspnœa in a woman, aged 25. The first commencement of the tumour was at the age of 11 years, with great increase between the ages of 15 and 17. Six years before admission, M. Gosselin employed puncture, with the application of caustics and drainage. The tumour on examination was of the size of half a fist, the central lobe being especially large, hard, and non-fluctuating. There was habitual dyspnœa, with dysphagia and weakness of voice. Whilst the patient was in the hospital there was an attack of subacute thyroiditis, after cessation of which the operation was undertaken. The gland was removed through a curved incision with its convexity downwards, extending to the common carotid on each side, and passing immediately above the sternal notch in the median line. The trachea was found strongly curved to the right and slightly flattened from before backwards, but not softened or degenerated. It was intimately adherent to the gland, from which it was removed from below upwards. There was very little loss of blood during the operation. Silk ligatures, which were first employed, were mostly replaced by catgut ones, and the wound was united by wire sutures. There was severe dysphagia for several days, followed at the end of a week by an attack of bronchitis and tracheitis. The result was complete cicatrisation of the wound in the fifth week, accompanied by complete and persistent aphonia.

2. *Martel on Œdema of the Right Arytenoid Cartilage.*—Dr. E. Martel (*Annales des Malad. de l'Oreille, du Larynx, etc.*, Dec. 1880) relates the case of a sergeant-major who, with a history of great hoarseness and dysphagia of three days' duration, presented a round swelling of the right arytenoid eminence, of the dimensions of a medium-sized grape. Its mucous membrane was stretched, shining, and of a greyish colour. The epiglottis was red and slightly swollen, the remainder of the larynx being normal. The œdematous part was twice touched with a solution of chromic acid

(1 in 4), and in three days recovered its normal appearance, the hoarseness and dyspnœa having completely disappeared. The etiology of the affection appears to have been the excessive use of the voice whilst commanding, and the effect of damp cold, in a person of drinking habits. The author also mentions a case of syphilis of the larynx, accompanied by œdema of the glottis threatening asphyxia, in which the latter symptom was successfully relieved by applications of chromic acid.

3. *Barthelemy on Chancre of the Fauces.*—Dr. Barthelemy (*Annales des Malad. de l'Oreille, du Larynx, etc.*, Dec. 1880) relates a case of hard chancre on the anterior pillar of the fauces, occurring in a man, aged 28. It appeared as a simple erosion—not ulceration—about the size of a small almond on the left anterior pillar. Its base was smooth, not depressed, and its margins were scarcely at all raised. The left tonsil was red, much swollen and prominent, and presented a certain number of follicles participating in the general inflammation, but no more marked elevations, or white or yellowish points, as seen in acute rheumatic tonsillitis. With the finger, induration could be felt in the left tonsil and anterior pillar. The pharynx, uvula, and the right side of the fauces were entirely unaffected. Between the angle of the jaw and the sterno-mastoid a very hard gland, about the size of a nut, was found; and a chain of glands could be detected extending downwards along the same muscle. The patient denied syphilis. Obstruction of the Eustachian tube and deafness of the left ear followed. Under expectant treatment, the chancre healed in ten days or a fortnight, and secondary symptoms subsequently appeared.

4. *Krishaber on Removal of Foreign Bodies from the Larynx.*—In a paper published in the *Annales des Malad. de l'Oreille, du Larynx, etc.*, for Dec. 1880, Dr. Krishaber considers the different methods of removing foreign bodies which have become lodged on a level with the glottis, describes four cases in point, and finally arrives at certain conclusions. The cases are very briefly as follows. Case 1 was that of a workman, aged 36, with a fifty-centime piece lying horizontally across the vocal cords, with its margins engaged in the ventricles of Morgagni. It was removed by forceps, under guidance of the mirror, but was accidentally swallowed immediately afterwards. Case 2. A fifty-centime piece lodged in a similar position in the larynx of a man, aged 35. Tracheotomy was performed, and the coin removed some days afterwards, in the following manner. The cannula having been removed, the coin was pushed into the mouth by means of a large sound passed through the tracheal wound, whilst the patient was in the horizontal position. In case 3, a flat piece of bone, fixed in about the same situation, was removed with forceps *per vias naturales*. Case 4. A girl, aged 9 years, had a copper ornament (of the size and shape of a silver twenty-centime piece) lodged in the larynx on a level with the vocal cords. It was removed by the following method. The child being laid on its back across a bed with its head hanging over the edge, the surgeon knelt down in front of it, and passed his left forefinger into the larynx, whilst with the right hand he introduced a slender pair of laryngeal forceps, and extracted the foreign body. In regard to the removal of foreign bodies from this situation, the author distinguishes two varieties of substances; first, those stuck into the mucous membrane, such as pieces of bone, fish-bones, pins, etc.; and secondly, bodies which do not adhere to the laryngeal walls, as coins, nuts, etc. The former, he recommends, should be removed *per vias naturales* without previous operation; the latter also *per vias naturales*, but only after the trachea has been previously opened, and, if necessary, plugged, in order to prevent the foreign body from falling into the trachea or bronchi.

E. Cresswell Baber, M.B.

6. *Sturge on Ulceration of the Larynx due to Congenital Syphilis.*—Dr. W. Allen Sturge (*Path. Trans.*, 1880) describes the case of a boy, aged 3½ years, whose father had undoubted syphilis two years before marriage. When a baby, the child suffered from snuffles and sores, which were cured by inunction; at twelve months' old, he had an attack, in which he lost his voice, and from which he recovered; but six months later he lost it again and had difficulty in breathing; this condition had continued. The child died suddenly, and on *post mortem* examination the true and the false vocal cords were found ulcerated, and ulceration and swelling extended upwards and downwards. The ventricles were filled with whitish growths which passed to the anterior commissure, across which they communicated by a thin narrow band; they were probably the result of congenital malformation. Robert Saundby, M.D.

7. *Schnitzler on the First Endolaryngeal Operation during Anæsthesia.*—By this operation, the successful removal of a papilloma laryngis from the larynx of a boy eight years old, under the influence of ether, Professor Schnitzler has shown for the first time that an anæsthetic may in certain circumstances be used during endolaryngeal operations. Professor Schnitzler describes (*Wiener Med. Presse*, 1880, Nos. 48, 49) the operation as follows:—'An assistant seated opposite me took the boy on his knees and held him fast. Ether was then administered. So soon as the boy was narcotised, an assistant opened the mouth with a suitable dilator, drew forward the tongue with a forceps, and, taking hold of it with his left hand, held it so that I could not only pass the laryngoscopic mirror conveniently into the throat, but could also direct into the cavity of the mouth by means of a reflector on my forehead, the light of a gas flame situated on the patient's right. Holding the mirror with my left hand, I introduced the laryngeal polypus forceps with my right, and, notwithstanding the secretion collecting in the throat, I succeeded in rapidly seizing and extirpating the new growth.' A slight recurrence was readily removed by the application of caustic.

James Anderson, M.D.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

1. Gee, Samuel.—Diseases of the Nervous System. (*St. Bartholomew's Hospital Reports*, vol. xvi, 1880.)

2. Legg, J. Wickham.—On a Case of Delirium Tremens accompanied by Jaundice. (*Ibid.*)

3. Ormerod, J. A.—Some Cases of Intracranial Syphilis. (*Ibid.*)

4. Bruce-Clarke, W.—Changes in the Optic Disc associated with Spinal Concussion. (*Ibid.*)

5. Jessop, W. H.—Case of Hystero-Epilepsy, with Hemianæsthesia and Chorea. (*Ibid.*)

6. Moore, Norman.—Notes of *Post Mortem* Exami-

nations of Cases of Hæmorrhage within the Cranium. (*Ibid.*)

7. SHAW, T. CLAYE.—Case of Congenital Absence of one Olfactory Bulb. (*Ibid.*)

8. LAWSON, ROBERT.—The Epilepsy of Othello. (*Jour. of Mental Science*, April, 1880.)

9. CHAMBARD, ERNEST.—A Case of Hysteria with Somnambulism. (*Ibid.*)

10. MÜLLER, FRANZ.—Cases of Hysteria with Paralysis, treated by Metallotherapy. (*Ibid.*, Jan. and April, 1880.)

11. BACON, G. MACKENZIE.—Chorea at an Advanced Period of Life. (*Ibid.*)

12. LYLE, THOMAS.—Cases of Tumour of the Brain in the Insane. (*Ibid.*, Oct. 1880; *Brit. Med. Jour.*, Nov. 20, 1880.)

13. CLEVENGER, S. V.—Plan of the Cerebro-Spinal Nervous System. (*Chicago Jour. of Nervous and Mental Disease*, Oct. 1880.)

14. SHAW, J. C. and WOODSIDE, J. S.—A Case of Diffuse Myelitis. (*Ibid.*)

15. WEBBER, S. G.—A Case of Acute Myelitis with interesting Microscopical Changes. (*Ibid.*)

16. BANNISTER, H. M.—A Case of Meningo-Encephalitis with Peculiar Symptoms, and Remarks on the Pathological Significance of the Pacchionian Bodies. (*Ibid.*)

17. PICARD and PAUL MOREAU.—A Case of Traumatic Aphasia. (*Annales Médico-Psychologiques*, July 1880.)

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1. *Gee on Diseases of the Nervous System.*—In this contribution to the *St. Bartholomew's Hospital Reports* for 1880, Dr. Gee gives reports of cases of various obscure forms of nervous disease, with pithy comments upon them. Eight cases of spastic paraplegia in infants are recorded, and the essential characteristics of the disease are tersely collated. Next follow cases of spastic paraplegia in the adult ('spasmodic spinal paralysis', Erb, 'spasmodic tabes dorsalis', Charcot), spastic diplegia with sclerosis of the whole encephalon, and inherited syphilis with sclerosis of the encephalon. Dr. Gee makes some critical remarks on the subject of paralysis due to compression of the arm by the head while asleep. This most commonly occurs during drunkenness. If the compression have been of short duration, recovery is speedy; if it have been prolonged, paralysis may last several weeks, or longer. Three different causes may be assigned to this palsy. Duchenne describes it as a paralysis *a frigore*, due to exposure of the arm to cold; but his reasons seem to be unsatisfactory. It is more generally believed to be due to injury of the nerve-trunks of the arm; this may sometimes be the case, but, by comparing the particular muscles paralysed with the nerves which may have been subjected to pressure, it will often be found that they do not correspond, and that some further explanation is necessary. This may be afforded by the third hypothesis; the flow of blood through the brachial artery being arrested, the palsy is partly ischæmic, and due to arrested nutrition of the nerve-endings. Certain cases, however, are not readily explained by any hypothesis; one such is related. Among other cases described, is one of traumatic myelitis, a fall out of window having been followed by muscular atrophy and muscular rigidity, and one of motor ataxy of the legs, associated with diplopia and paralysis of the orbicularis oris. A very interesting description of the symptoms of teichopsia, a form of transient hemiopsia, given by the patient himself, is also introduced.

2. *Legg on Delirium Tremens with Jaundice.*—The combination of delirium tremens and jaundice is apparently rare. Leyden has mentioned some such cases, and noted that the mortality was very high. Dr. Wickham Legg now describes (*St. Bartholomew's Hospital Reports*, 1880) the case of a man who had three attacks of jaundice in about eighteen months; each attack was complicated with delirium tremens, and ended in recovery after running the following course. First, there were vomiting and diarrhœa for a few days; then jaundice appeared; and some hours later, great pain in the hypochondrium and belly. Next, usually after several days, characteristic delirium tremens appeared, and lasted some days; after its cessation, the jaundice remained for several weeks before the patient finally and completely recovered.

3. *Ormerod on Intracranial Syphilis.*—Dr. Ormerod gives, in the *St. Bartholomew's Hospital Reports* for 1880, a very brief summary of what is known of the relations of syphilis to nervous disease, and attention is directed to the desirability of being able to recognise syphilitic affections by their symptoms alone, and independently of any specific history. With respect to this latter point, the following questions are important. Can other causes of nervous disease be excluded? Is there evidence of coarse structural disease in the regions which syphilis is known specially to affect? Are the symptoms such as to require for their explanation more than one lesion? What effect has antisyphilitic treatment? Three illustrative cases are related.

4. *Bruce-Clarke on Changes in the Optic Disc in Spinal Concussion.*—The author's observations (*St. Bartholomew's Hospital Reports*, 1880) tend to show that there is, in cases of spinal concussion where the lower cervical and upper dorsal regions are affected, *early transient* change in the optic disc. It is evident that this fact, if clearly established, would be of immense value from a medico-legal point of view. Three cases of simple concussion are related, and one of spinal fracture; well-marked changes in the optic disc were observed in all but one, whose injuries were of a comparatively slight nature. In the two patients who recovered, the changes were transitory, and could not have been even suspected without periodical ophthalmoscopic examination. The appearances noted consisted of hyperæmia and sometimes of œdema of the optic discs.

5. *Jessop on Hystero-Epilepsy with Hemianæsthesia and Chorea.*—This case, related in *St. Bartholomew's Hospital Reports*, 1880, seems undoubtedly to agree with Charcot's description of hystero-epilepsy, complicated with anæsthesia, analgesia, ischæmia, paralysis, contractures, amaurosis, and, lastly, chorea. Notwithstanding this, treatment by metalloscopy and ovarian pressure had not the slightest effect on the anæsthesia, fits, or chorea. The anæsthesia and rigidities disappeared, as usual, somewhat suddenly, during a fit. The disease dated from an attack of scarlet fever, and it would seem that the starting point of the malady was not ovarian, but rather due to general nervous derangement.

6. *Moore on Intracranial Hæmorrhage.*—Dr. Moore gives, in the *St. Bartholomew's Hospital Reports* for 1880, notes of *post mortem* examinations of cases of intracranial hæmorrhage. There are two cases of hæmatoma of the dura mater; both patients were greatly emaciated, one from cancer of the pylorus, the other from diabetes; in neither had any symptom pointing to the hæmatoma been observed. Fourteen cases of cerebral hæmorrhage are given; in every one the heart was larger than natural; in ten, the hypertrophy was associated with chronic interstitial nephritis.

7. *Shaw on Absence of one Olfactory Bulb.*—The patient, whose case is described (*St. Bartholomew's Hospital Reports*, 1880), was aged 53, and had been insane over twenty years. She was demented, violent at times, and epileptic without aura. The cerebral defect was not suspected during life. The right olfactory lobe was completely absent, and no trace of the nerve could be detected in its roots, body, or prolongations. There were no perforations in the cribriform plate of the ethmoid, nor in the dura mater covering it. A difference was noted in the convolutions of the lower surfaces of the frontal lobes; the right olfactory sulcus was distinct, but was wanting in the elevated, bulbous, transversely placed convolution from which the middle root of the olfactory lobe springs. An engraving of the lower surface of the frontal lobes accompanies the paper.

10. *Müller on Metalloscopy.*—In the January and April numbers of the *Journ. of Ment. Science* for 1880, Dr. Franz Müller records the results of a number of very careful experiments and observations made by him on two patients in the General Hospital at Graz. He states, apparently with good reason, that his experiments, conducted with all conceivable precautions (test-experiments) completely confirm the assertions made by Charcot, Westphal, and other observers, while at the same time they go beyond these, for they prove also the transference of motor paralysis, the superiority in a new direction of the action of the magnet over metal plates, and, further, teach that the action of the metal plates is notably hastened by previous moistening of the skin with an electrolytic substance. The author's conclusions are, of course, strongly opposed to the 'expectant attention' theory.

11. *Bacon on Chorea late in Life.*—One of these rare cases is described by Dr. Mackenzie Bacon in the *Journ. of Ment. Science*, July 1880. A married woman, aged 58, was admitted into the Cambridge Asylum, in a maniacal state, and suffering from severe chorea, which had existed six months. She was very thin and anæmic. She was treated with zinc, arsenic, and other drugs, and fed with all sorts of nourishment and wine for some time, with no benefit, except that she gained flesh and became more manageable, but the chorea improved hardly at all. At the age of 61 she died, having suffered from chorea uninterruptedly for nearly four years. Chronic arachnitis, a shrunken brain, and a large collection of serum in the ventricles, are given as the *post mortem* appearances.

13. *Clevenger on the Plan of the Cerebro-Spinal Nervous System.*—In this paper, which appears in the *Chicago Jour. of Nervous and Mental Disease* for October 1880, and is freely illustrated by diagrams, the plan of the nervous system is carefully traced from the lowest forms of animal life up to man. Some of the author's conclusions are here given. The primitive sense is tactile, and all senses have proceeded from its differentiation; the protozoon is affected similarly by the undulations of any of the forces; for instance, the tremor of a musical note, heat, light, or electricity, alike produce contractions or expansions of its mass; in a higher form of life nerve-tissue appears, which conveys only certain vibrations, and rejects all others. Qualitative differentiation of the nervous organisation proceeds dorsally, with a tendency towards the head end; that portion of the animal most directly in relation with the molecular movements of the environment develops the highest centres and projections. Repetition of parts of a system, up to a certain point ceases; and these parts become commissurally united before another system is perfected. Blending the results of comparative embryology and anatomy, the sympathetic system (intestinal and vascular nerves) develops first. The second system to appear phylogenetically is the spinal, equivalent in the invertebrates to their 'cerebral' ganglia. The third system is the intervertebral, the swellings upon the posterior roots of the spinal nerves. The cerebellum is formed from fused hypertrophied intervertebral ganglia; many sensory cranial nerves pass through this organ, and by the fusion of these originally separate centres, co-ordination occurs necessarily. Excess or want of development places all ganglionary tubercles and lobes of the encephalon in the category of this third system. Thus, the præfrontal lobe of the cerebrum, the olivary body, the olfactory lobe, the tubercula bigemina, etc., were originally intervertebral ganglia, which they still resemble in many points. The præfrontal lobe is the last intervertebral ganglion to develop; it grows larger with the scale of intelligence, and presses the occipital backward, downward, and forward, thus forming the temporal, erroneously called the middle, lobe.

14. *Shaw and Woodside on a case of Acute Diffuse Myelitis.* — A general paretic patient, aged 32 (*Chicago Jour. of Nervous and Mental Diseases*, Oct. 1880), became suddenly paralysed in the right hand and fore-arm; this was followed by paralysis of the right leg, and, next day, by paralysis of the left limbs; bed-sores appeared, and rapidly became worse; the temperature, which had been normal on the first day, rose almost daily; the patient died on the fourteenth day, the temperature having reached above 105 deg. At the necropsy, the chronic meningeal changes of general paresis of the insane were observed. The microscopical appearances found in the cord showed almost indubitably that the acute spinal paralysis observed was due to extension of older and more chronic lesions in the white matter to the anterior horns. The authors know of no other case in which acute myelitis of the anterior horns came on by extension of a primary lesion to them; when a similar extension has occurred previously, it has always produced a chronic myelitis of the anterior horns. The course and symptomatology of the case now related, the vacuolation and swelled state of the ganglion-cells, all go to show that the lesion was acute.

15. *Webber on a case of Acute Myelitis.*—A typical case of acute myelitis, running a rapid course, and ending in death only thirteen days after the commencement of the disease, is related in the *Chicago Jour. of Nervous and Mental Disease*, Oct. 1880. There was no history of syphilis or intemperance, and the disease was obviously caused by prolonged exposure of the legs to cold and wet, two days before the first symptoms appeared. There was an interesting and characteristic initial rise of temperature, with subsequent fall when the destruction of the cord had considerably advanced. The microscopic appearances found include nearly all the changes observed in acute parenchymatous myelitis; they are well described by the author with the aid of good illustrations. The change of most interest in this particular case was the enlargement of the axis-cylinders, this being greater and more extensive than usual; many were eight or ten times the normal diameter. When seen in a longitudinal section, the enlargements were of various shapes, being spherical,

fusiform, varicose, etc. Many of the most dilated axis-cylinders contained cavities, so-called vacuoles, of various sizes. The enlarged cylinders were found on the boundaries of the most diseased portions, seeming to form a transition between the comparatively healthy fibres, and the regions where the fibres had entirely disappeared, and to indicate one of the first changes of this rapidly destructive morbid process.

16. *Bannister on a Case of Meningo-Encephalitis.*—An acute idiopathic case of this disease, occurring in a previously healthy man, is reported by Dr. Bannister in the *Chicago Jour. of Nerv. and Ment. Dis.*, Oct. 1880. The author directs special attention to a remarkable development of the Pacchionian granulations which was observed after death in the neighbourhood of the median fissure, three inches or more in front of the fissure of Rolando. Behind this sulcus they were very scarce; and the only point at which there was any considerable collection of them was on the internal face of the right hemisphere, on both sides of the occipital fissure, nearly or quite three-quarters of an inch from its top. Dr. Bannister expresses the opinion that, whether these granulations be normal or abnormal growths, and whether they serve a physiological purpose or not, their abundance in the present case was unusual and pathological. He says that, even if they are normal when developed in due and proper proportion, it is easy to see how their excess might be pathological, irritating, and mischievous. [The large development of the Pacchionian bodies in this case should probably not be regarded as in any way a cause of the meningitis, but rather as one of its results, due to the great increase in the functional activity of these organs. Key and Retzius hold that the Pacchionian bodies serve to allow the passage of fluid from the cerebro-spinal serous cavities into the veins and sinuses of the dura mater, around which they are grouped. While permitting the fluid to pass, it is believed that these glands act as natural filters to it, preventing the passage of any morbid corpuscular elements into the blood. It follows that, in a case of meningitis, the functions of the Pacchionian glands would be enormously increased; they would, consequently, become hypertrophied, and the cellular products of inflammation intercepted by them would also give rise to proliferation within their tissue. It is evident that Dr. Bannister, when writing his paper, had not seen a recent contribution by Key on tumour-metastasis in the central nervous system, which was reported in the LONDON MEDICAL RECORD for March 1880, p. 97.—*Rep.*]

17. *Picard and Moreau on a Case of Traumatic Aphasia.*—This case, related in the *Annales Méd.-Psychol.*, July 1880, is that of a child, aged 12, who received a wound which penetrated the roof of the left orbit. Much fluid, and a small quantity of brain-substance, escaped from the wound. The patient was comatose for five days, with some rigidity of the right side. Intelligence returned, but the power of articulation was quite lost, and complete right hemiplegia took the place of the rigidity. At the end of the month, the patient could speak a few words and walk a few steps. At the end of a year, he had practically recovered from both aphasia and hemiplegia. The chief points in the treatment were the application of ice to the head, and the administration of purgatives. C. S. W. COBBOLD, M.D.

TOXICOLOGY AND MEDICAL CHEMISTRY.

RECENT PAPERS.

1. BARLOW.—Poisoning by Chlorate of Potassium.
2. ROSSBACH.—The Most Delicate Tests for Poisons. (*Deutsch. Amerik. Apot. Zeitung*, Dec. 1880.)
3. JEANNEL, M. J.—On a Multiple Antidote. (*Canadian Jour. of Med. Science*, p. 338.)
4. JELLETT.—A Polariscope for Microscopy. (*Dublin Med. Jour.*)
5. PETIT.—On Digestive Ferments. (*Jour. de Thérap.*, 1880.)
6. EDINGER.—The Condition of the Free Hydrochloric Acid of the Gastric Juice in Amyloid Degeneration of the Mucous Membranes of the Stomach. (*Berl. Klin. Woch.*, 1880, No. 9.)
7. PEKELHARING.—On Peptones. (Pfluger's *Archiv*, Band xxii.)

1. *Barlow on Poisoning by Chlorate of Potassium.*—Dr. Adelia Barlow related recently at the Chicago Medical Society three cases of so-called 'poison by chloras potassii'. The cases are by no means clear, though the narrator is 'very certain the symptoms were those of poison'. A child, 19 months old, ill with scarlet fever, got about one drachm in 24 hours, together with quinine and iron. We are not told for how many days the chlorate was taken, but one evening 'the temperature was increased, the extremities cold, and breathing stertorous. There was every evidence of poison' (*sic*), but the child recovered under brandy. 'In casting about for the cause of this sudden change, I *feel* it was due to the chlorate of potassium.' If the narrator be, as one may suppose from the christian name, a lady, this *feeling* that there was poison at work is amusing, and suggests a solution by the feelings of many obscure cases. The second child, eight months old, got 'very large doses,' *i.e.* (apparently) two-and-a-half grains every three hours. 'In addition, I had given brandy, 10 drops with each dose.' The child took two or three doses before the 'symptoms of poisoning occurred'. The last case, three weeks' old, an infant, 'with a case of thrush', took only one dose. 'The mother saw the medicine was poisonous, and would not give any more.'—*Chicago Medical Journal*, May 1880.—[It is possible to be poisoned by the drug in question setting up gastro-intestinal inflammation, but such reports as the above have no scientific value. We hope, for the credit of the ladies, that they do not represent the literary medicine of the future.—*Rep.*]

E. MACKEY, M.D.

2. *Rossbach on the most Delicate Tests for Poisons.*—Physiologists have long been acquainted with the action of alkaloids and active principles on animals, and this knowledge is constantly utilised in medico-legal investigations. The smallness of the dose required to produce characteristic reactions in the case of some of the better-known alkaloids, is shown below. Strychnia induces tetanus in dead frogs and mice in doses of 0.0005 gramme (Falck jr.) Atropia dilates the pupil in man and warm-blooded animals in doses of from 0.0001 (Graefe) to 0.0000005 (Ruiter) gramme. Veratria prolongs the muscle-curve in frogs in doses of 0.00005 gramme (Petzold). Digitoxin* arrests the frog's heart in systole in doses of

* O. Schmiedeberg (*Archiv für Experiment Path. und Phar.*, Band iii, p. 19) affirms that there are in digitalin four active principles: Digitoxin, the most active of all, constituting the greater part of Nativelle's crystallised digitalin; digitalein, digitalin, and digitoxin. Digitaliresin and toxiresin are derivates respectively from digitalin and digitoxin.

0.0001 gramme (Schmiedeberg). Antiarin* arrests the frog's heart in systole in doses of 0.000005 gramme (Schmiedeberg). Curare paralyses the motor nerves in frogs in doses of 0.000005 gramme (Schmiedeberg). Muscarin arrests the frog's heart in systole in doses of 0.0001 gramme (Schmiedeberg). Delicate as these tests undoubtedly are, Professor Rossbach (*Ueber die feins. Gift.; Deutsch-Amerik. Apot.-Zeitung*, Dec. 1, 1880) alleges that he has discovered a method which is infinitely more delicate—that he has, in fact, arrived at a climax of delicacy. He employs for his tests, not frogs or mice, but infusoria. The characteristic appearances, he says, of poisoning by alkaloids in infusoria, are, in comparatively large doses, rapid molecular change, followed by collapse into a shapeless mass; whilst, in smaller doses, we find rotation, followed by powerful contractions of the whole body, dilatation and paralysis of the contractile vesicle, and lastly, collapse. To give some idea of the infinite smallness of the dose required to produce this effect, he gives a few examples from his own observations. With strychnia, the highest degree of expansion and paralysis of the contractile vesicle is observed, the expansion and infusorial rotation being obtained in a dilution of 1 in 15,000. If, accordingly, he says, we take a very small drop of infusorial water, weighing 0.001 gramme, the smallest quantity of strychnia necessary for the production of the above-mentioned symptoms is 0.00000006 gramme. This number is apparently obtained by dividing the weight of the drop of infusorial water (0.001 grammes) by 15,000, *i.e.*, the dilution which suffices for the production of these symptoms. In the same way, he says, veratria will act on the same quantity of infusorial water, in a dose of 0.00000022 grammes; whilst atropia requires 0.000001 gramme, and quinine 0.0000002 gramme. He thinks it would be quite easy for doctors, officers of health, and chemists to adopt his plan with success. The infusoria may be readily obtained by placing water with bread and meat in a warm-chamber. [The paper is disappointing, and unsatisfactory. Not a single experiment is given fully in detail, and the author's arguments are by no means easy to follow. Moreover, his views on the subject of infusoria are evidently somewhat hazy. If by infusoria, with contractile vesicles, obtained by the maceration of bread and meat, he means amœbæ, the method is already well-known as a test for the physiological action of drugs, though what advantage such amœbæ have over the ever-ready white corpuscles of the blood, with which in nature they are identical, is not obvious. If, however, as he would seem to imply, he proposes the quantitative action of these alkaloids as a quantitave test for their presence in complex solutions, such, for example, as the contents of the stomach, he gives us no information as to the method of pursuing the investigation. The most that can be said of the paper is that it is suggestive.—*Rep.*]

William Murrell, M.D.

3. *Jeannel on a Multiple Antidote.*—M. J. Jeannel read a memoir before the Society of Legal Medicine (*Canadian Jour. of Med. Sciences*), in which he proposed as a multiple antidote the following formula: Solution of ferric sulphate, D 1.45, 100 grammes; common water, 800 grammes; calcined magnesia, 80 grammes; washed animal charcoal, 40 grammes. Preserve separately, on the one hand, the solution of ferric sulphate; and, on the other hand, the magnesia and the animal charcoal, in a flask with water. When required for use, pour into this flask the ferric solution; shake well. This mixture should be administered *coup sur coup*, in doses of 50 to 100 grammes. Employed in suitable proportions, it renders insoluble the preparations of arsenic, zinc, and digitalin; it does not render completely insoluble the oxide of copper; it leaves in solution appreciable quantities of morphia and strychnia. It does not decompose, and does not precipitate the cyanide of mercury, nor tartar emetic; it entirely saturates free iodine; it acts only partially upon solutions of the alkaline hypochlorites. This antidote is perfectly efficacious against the arsenical preparations, in the proportions of 120 grammes of the antidote for 5 decigrammes of arseniate of soda. It retards the toxic effects of sulphate of strychnine, and would perhaps give time to administer salutary evacuants. It is efficacious against digitalin injected into the intestine of a dog in the dose of 1 decigramme. This formula is preferable to the officinal hydrated peroxide of iron, since the latter undergoes, by the action of time, at a temperature higher than 15 deg. Cent. (59 deg. Fahr.), a molecular modification which renders it untrustworthy against the arsenical preparations. This formula, like the peroxide of iron extemporaneously prepared, the hydrate of magnesia and animal charcoal, satisfies as a counterpoison a great many indications. It is, however, inefficacious against the mineral alkalies, phosphorus, the hypochlorites, the cyanides, and tartar emetic.

4. *Jellett on a Polariscope for Microscopy.*—Authors allude to the great want of a simple handy means of quantitatively determining albumen, and, among other plans, recommend the polariscope. The instrument put forward appears to be that of Soleil-Ventzke, where the left-handed rotatory polarisation of albumen and the opposite movement of sugar, are read off by a compensator of left or right quartz. The Editor of the *Dublin Medical Journal* states that he has used this instrument a good deal, and has been much impeded by the varying capacity of different individuals for the distinguishing of minute differences of colour. This difficulty is mentioned by Guttmann in his *Handbook of Physical Diagnosis*, and in his description Guttmann commits the curious blunder (p. 386) of calling the vernier used for reading off minute fractions of a degree by the term 'nonius', which is an entirely different thing, being a diagram on the engineering scale rule. The Editor of the above-mentioned periodical considers the quartz polariscope an essentially unreliable instrument, and has seen the most careful observers make different readings. He therefore commends the simple and perfect polariscope invented by a distinguished Irishman, the Rev. J. H. Jellett, of Trinity College, Dublin. This apparatus is founded on the fact that there are two varieties of turpentine, having opposite rotatory polarisation, one of which can be made to neutralise the left rotation of albumen, and the other the right polarisation of sugar. A beam of light is polarised by a nickel prism, and the extraordinary ray which passes up is divided by a peculiar prism, invented by Mr. Jellett, into two pencils of pure white light. The interposition of a tube of albuminous fluid extinguishes one of these pencils, which can, however, be restored by a stratum of right-handed turpentine, and correspondingly with sugar. The exact thickness of the stratum of turpentine required in each case forms an accurate index of the strength of the saccharine or albuminous solutions; and, as it is merely a question of seeing

* Antiarin is the poisonous principle of upas antiar, discovered by Pelletier and Caventou in 1824.

or not seeing pure white light, there is no possibility of error. This apparatus can be perfectly relied upon.

5. *Petit on Digestive Ferments.*—M. Petit points out as the result of a series of studies of the digestive ferments (*Journal de Thérapeutique*, 1880), that the best mode of testing pepsine is that which is based on the total transformation into peptones of a fixed weight of fibrine. The simple solution of fibrine is only a part, and even, it may be said, an insignificant part, of the action of pepsine. It is possible to prepare pepsines transforming 1,000 times their weight of fibrine into peptones, and dissolving in some hours 500 times their weight of fibrine. To these three conclusions he adds a series of other conclusions, of which the most practically important are these: An alcoholic solution of pepsine, even with 20 per cent. of alcohol, loses nothing of its activity. In the place of its activity, the alcoholic percentage is lowered to 5 per cent., as necessarily the case in the stomach. Preparations of pepsine in the forms of elixir, of which the degree of alcohol is 16 to 18 per cent., and are not, therefore, to be objected to, need only to be diluted with water in administering them, and, moreover, the stomach contains always enough fluid to dilute them in the desired proportion. These researches correspond with those of Professor Oscar Liebreich, made some time since, to whom is due the credit of first preparing an extremely active glycerine extract of pepsine, which is preserved and made palatable by a very slight addition of a light hock. Most of the preparations of pepsine are apt quickly to lose their active power of transforming fibrine into peptones, while Liebreich's Pepsine Essenz, which has, as Prior, Panum, and Bartlett, among chemists, and many physicians, have observed, a permanent activity and very potent peptic action, with the advantage of being as palatable as it is efficient.

6. *Edinger on the Condition of the Free Hydrochloric Acid of the Gastric Juice, in two cases of Amyloid Degeneration of the Mucous Membrane of the Stomach.*—Dr. Edinger (*Berliner Klin. Wochenschrift*, 1880, No. 9) records two cases of amyloid disease of the stomach, in which he failed to find any traces of free hydrochloric acid in the gastric juice. He obtained the gastric juice by making the patient swallow small pieces of sponge, covered with gelatine-capsules, which were attached to silk threads, and could be withdrawn.

7. *Pekelharing on Peptones.*—Pekelharing (*Pfluger's Archiv*, Band xxii, Section 185) thinks that Adamkiewicz's peptone differs considerably from that which has been described as peptone by Maly, Plosz, etc. He agrees with Adamkiewicz that these differences do not depend upon any admixture with albumen. Fibrin digested with gastric juice from two to five hours is neutralised and heated to remove the syntonin, and then filtered hot. The filtrate is treated with acetic acid, and saturated with sodium chloride. The flocculent precipitate resulting is filtered after eight to twelve hours, then dissolved in hot water, when small quantities of albumen remain undissolved, and filtered hot; out of the filtrate the 'peptone' may be separated by treatment with acetic acid and saturating with common salt. The precipitate is filtered, dissolved in water, and dialysed to remove the salt. The fluid becomes gradually turbid from diffusion of 'peptone', which is soluble in hot water. Finally, it is dried *in vacuo* to a powder, and dissolves with difficulty in cold water, more readily in warm, but the solution becomes turbid on cooling, and the 'peptone' separates. A small quantity of common salt prevents this separation, a greater quantity brings it about in the cold, a still greater in the heat; nitric acid gives a precipitate, dissolved by heat; acetic acid and ferrocyanide of potassium give a copious precipitate. R. SAUNDBY, M.D.

REVIEWS.

Das Allgemeine Krankenhaus der Stadt Berlin im Friedrichshain, seine Einrichtung und Verwaltung. Von A. HAGEMEYER, Œconomie-Inspector, Lieutenant A.D. Mit 1 situationsplan, 3 tafeln und 8 in den text eingedruckten Holzschnitten. Berlin: August Hirschwald. 1879.

The General Hospital of the City of Berlin, in the Friedrichshain; its Arrangement and Administration. By A. HAGEMEYER, Manager, Lieutenant on the retired list. With one ground plan, 3 plates, and 8 woodcuts printed in the text. Berlin: August Hirschwald. 1879.

THIS is a detailed description of the well-known Friedrichshain Hospital in Berlin, both as to its construction and arrangements and its *personnel* and expenditure. Nothing is omitted, and it consequently forms a valuable work of reference for many points of hospital detail. The first part gives a description of the establishment and its arrangements; the second, of its working and administration; whilst in the appendix are the codes of instructions for the various officials and servants.

The building was the work of the architects Gropius and Schmieden: it was commenced in the autumn of 1868, and finished in 1874, on the 8th of October of which year it was opened. The ground on which it stands is 95,500 square mètres in extent (or 23½ acres) and has a triangular shape, being surrounded by a strongly built wall 2.51 mètres high (8¼ feet). The principal entrance is towards the Friedrichshain, a grove or wood which separates it from the city: the entrance to the offices (*Œconomie Gebäude*) is in the Lansberg Road, and the entrance for funerals, etc., in the neighbourhood of the mortuary on the third side. The establishment consists of—

Administration Block,	1,401 sq. mètres	(=1,667 sq. yds.)	
Offices (*Œconomie Gebäude*)	1,332 ,,	(=1,585 ,,	)
Icehouse	56 ,,	(= 67 ,,	)
Two Gatehouses	239 ,,	(= 285 ,,	)
Bathhouse	162 ,,	(= 193 ,,	)
Mortuary	285 ,,	(= 339 ,,	)
Four Pavilions (one storey) for the Surgical Division	2,736 ,,	(=3,255 ,,	)
Six two-storeyed Pavilions for the Medical Division..	4,184 ,,	(=4,979 ,,	)
Two Isolation Blocks ..	1,023 ,,	(=1,217 ,,	)
Total area ..	11,418 ,,	(=13,587 ,,	)

giving for the regulation number of sick (viz., 620), 18.4 sq. mètres (= 19 yards) per head.

Total cost of buildings	4,175,789 mks.	=£204,695	at 20.40 marks to the £ sterling.
Cost of furniture and fittings	345,000 mks.	= 16,911	
Grand Total	£4,520,789 mks.	£221,606	

Of this sum, however, 225,000 marks (=£11,025) were gifts from various sources, which reduces the expenditure of the municipality of Berlin to 4,295,789 marks (=£210,581).

In 1875-6 an additional pavilion for the accommodation of the women undergoing instruction as nurses, was erected, covering an area of 326.6 square mètres (=398 square yards), at a cost of 73,440

marks (=£3,599). The whole of the buildings are insured in the City Fire Insurance Company for 2,842,300 marks (=£139,328).

The administration block consists of two wings joined by a hall, through which is the main entrance to the establishment. The wings contain quarters for medical and other officials; the apothecary's laboratory, stores, heating apparatus, etc.

The *Œconomie Gebäude* stands at the opposite end of the enclosure, and consists of a block measuring 144 feet by 48. This contains the kitchen and the wash-house, the coal-store, boiler and engine house, and the chamber for disinfection of patients' clothing by steam. The cooking is done partly by steam and partly by ovens. The washing is done in the usual way by machinery. There is accommodation in this block also for the dining and sleeping rooms of the persons employed in it. The engine is a horizontal high-pressure machine working up to 10 or 12 horse-power actual. Here are also the water-pumps, which throw 38¾ cubic mètres of water per hour to a height of 36 mètres, *i.e.*, 8,525 gallons to a height of 118 feet. In the court-yard of this block there used to be a row of privies on the pail system; but these were often offensive, and were later on changed for water-closets, warmed in winter by the waste heat from the boilers so as to prevent the water from freezing. Near the engine-house are also an ashpit and receptacle for refuse. The icehouse has a space of about 5,000 cubic feet (143 cubic mètres). The bath-house is furnished with separate baths, a Turkish bath, a vapour-bath, and douche-bath, with the necessary accessories. The mortuary contains the usual space and arrangements for the dead, with means of cooling by ice in summer. There are two *post mortem* rooms, and one for making preparations. There is also a mortuary chapel and quarters for the attendants.

The surgical division of the hospital, consisting of four one-storeyed pavilions, was originally arranged so that two pavilions (VII and VIII) should be for male and two (IX and X) for female patients, each pavilion holding 33 patients. One of the female pavilions has, however, been since appropriated for males, on account of the greater preponderance in the number of the latter. Each pavilion is 35.15 mètres long by 10.36 broad (115 feet by 34) with a small wing on each side, 3.45 mètres by 7.53 (11⅓ feet by 24½.) The entrance (at the end) leads to the ward, before which are to be seen a day-room (since converted into an admission room) an attendant's room, a nurse's kitchen (*Thee-Küche*) with gas-cooking apparatus, two single-bedded rooms, a water-closet, and a staircase leading to the basement and also up to a small upper storey, which contains two isolation rooms, and the quarter for the resident assistant-surgeon. There is an operating theatre in one of the pavilions. The main ward is 29.66 mètres long and 9.10 broad (98 feet by 30). This gives an area of 270 square mètres (= 2,906 square feet). There are twenty-eight beds, fourteen on each side. Each bed has, therefore, 2.14 mètres of wall-space (= 7 feet) and 9.64 square mètres of floor-space (= 104 square feet). The height is 5.96 mètres (= 19½ feet), and the total cubic capacity 1608.6 cubic mètres (= 56,832 cubic feet). Each patient has, therefore, 57.45 cubic mètres (= 2030 cubic feet). If, however, we reckon nothing above 12 feet, this reduces the amount per head to 35.36 cubic mètres (= 1249 cubic feet). Small windows look on the ward from the nurse's room and the ward kitchen. Near the day-room are a bath-room and a lavatory, in the basement a heating apparatus, and in an upper storey a hot water reservoir and a store for the patients' clothing. One of the pavilions is floored with oak, but the others are flagged with Mettlach tiles, the latter being preferred, as less liable to absorb moisture, more easy to keep clean, and free from joints. All the ward windows are double (that is, with a division across the middle), the upper half being capable of swinging on a horizontal axis.

The medical division consists of six two-storeyed pavilions, with the following regulation distribution. Pavilion I for 32 women and 48 children; pavilions II and III, for 64 women (each); and pavilions IV, V, and VI, for 64 men (each). By a later arrangement, the children (except diphtheria cases) were placed in pavilion X (surgical side), pavilion I being kept for women alone, whilst the women brought from pavilion X were placed, with the children's diphtheria cases, in pavilion III.

There is not much difference in the dimensions or arrangements of the two-storeyed from those of the one-storeyed pavilions. The ground-floor wards, which are tiled, give 49 cubic mètres (= 1730 cubic feet) per head; the upper-floor wards, which are laid with pine, 52 cubic mètres (= 1832 cubic feet) per head. In the small rooms, the space is from 38 cubic mètres (= 1342 cubic feet) to 54 cubic mètres (= 1906 cubic feet). On each floor there are earthenware shoots, 26 centimètres (= 10¼ inches) wide, for dirty linen and floor-sweepings respectively.

The two isolation pavilions have two storeys, distributed in the same way, the one pavilion being for men, and the other for women. Each is divided into two separate parts, each part containing on each floor one eight-bedded ward, one for two beds, and a third for one bed. This gives forty-four patients for each pavilion. The entrance is in the middle of the long aspect of the pavilion, and opposite to it is the annexe containing the baths and closets. These last are tiled, but the floors of the wards, etc., are laid with ordinary wooden flooring.

The probationary nurses' pavilion is provided with dining-room, instruction-room, baths, etc. Each bed is separated by screens from its neighbours.

Heating and Ventilation.—There are five different plans of heating employed. 1. By ordinary stoves (not used in any of the wards). 2. By heated air, used in the two isolation pavilions, and in the *Œconomie Gebäude* for a winter drying-ground. 3. Combined air and water-heating in pavilion VIII. 4. Medium pressure water-heating in pavilions I-VII, IX, and X. 5. Steam-heating in the bath-house. The heated air is carefully moistened, and supernumerary stoves are provided for extra warming in severe weather. The foul air is carried out by shafts in the wall, with openings near the floor. These debouch under the roof. Ridge ventilation is carried on by means of a 'roof-rider' (*dachreiter*), or lantern, with side flaps, capable of being opened or shut, according to need. In the two-storeyed pavilions, the inlets for fresh air are in the centre, and the outlets for foul at the sides; in the upper storey, the positions are reversed. In the doors leading from the wards to the bath-rooms and closets, there are gratings in the lower parts, with the idea that there will be an air-current from the ward to the closets. This is more than doubtful, and the arrangement is to be deprecated.

Water-Supply.—The daily amount supplied is 0.31 of a cubic mètre per head (= 68 gallons), or a

total (for a strength of 700, all told) of 217 cubic mètres (= 48,000 gallons). There are, in addition, 93 cubic mètres (= 20,500 gallons) for the garden and grounds, including an ornamental fountain. The storage in the building is equivalent to two-thirds of the daily consumption, not including, of course, the amount for the grounds.

Drainage and Closets.—The drainage is connected with the system of the city drainage, the surface-waters flowing into gratings with automatic tumbler-traps. A system of continuous disinfection exists by means of reservoirs in the cellar of the administration block. Two kinds of closets are in use, one in the wards and bath-houses (called the first class), and the other in the rear of the establishment (called the second class). The first is an earthenware basin and siphon-pipe in one piece, provided with a closing valve at the bottom of the basin, which rises instead of falling, as in most valve closets. The second class are of more simple construction, being a form of the ordinary hopper closet. Arrangements are made for flushing with disinfecting fluids. The ordinary flushing is managed by a draw-up handle in the usual way. The whole establishment is lighted with gas, and there is telegraphic communication between the different parts.

Income and Expenditure.—The average number of patients is taken at 550, the total expenditure at 507,398 marks (= £25,000), or 2.528 marks (= 2s. 6d.) for each patient daily. The income is only 73,710 marks (= £3,600), which leaves about £21,400 to be provided for by the municipality. The persons to be admitted as patients must either be the really poor or cases of urgency; others may, however, be admitted on payment of 52.50 marks (£2 10s.) per month, or who are members of a sick benefit club. Certain classes of cases are excluded, viz., 1. Children under one year without mother or nurse; 2. Cases of mental disease; 3. Epileptics; 4. Ophthalmic cases; 5. Cholera; 6. Typhus; 7. Itch; 8. Small-pox; 9. Pregnant women in their eighth month; and 10. Syphilis.

Attached to the establishment is a school of instruction for female nurses, who must be healthy persons of good character, between the ages of 21 and 35. The fullest details are given in the second part of the work and the appendix with reference to all points of management and cost, clothing of both patients and attendants, washing, etc. The official regulations are also given in full with reference to all the staff and employés. Altogether, this work is a most valuable one on account of the extent and minuteness of its information. F. DE CHAUMONT.

The Cat: An Introduction to the Study of Backboned Animals, especially Mammals. By ST. GEORGE MIVART, Ph.D., F.R.S. With 200 illustrations. Murray.

SCIENCE has its fashions, which have the great peculiarity of being based upon reason, yet resemble all other fashions in their constant tendency to reaction. In the middle ages, when human subjects could not be used for anatomical purposes, the student, in many European universities, spent some of his time 'in dissecting the bodies of swine, as likest the human form divine'. This was decidedly better than neglecting practical anatomy altogether, and if it tended to errors, which have been refuted, it was also productive of much good work. After the Renaissance, anatomy was understood to signify human anatomy, so that, when the spirit of the eighteenth century stimulated research into the structure of the lower animals, their organs were described in what we may call human terms, just as grammarians compiled grammars of our own language on the already familiar Latin type, and classification was, practically, a vast system of subtraction, man being reckoned as possessing almost everything except mere modifications, like wings and fins, and the lower animals being placed further and further from him, the less they were endowed with his organs or characters. Lastly, anatomists began to concentrate their attention, not so much on the lowliness or high conformation of an animal, as on the nature of some particular organ. As no scientist can do everything at once, it naturally came to pass that a tendency was developed to classify animals and plants by the changes in that organ which each authority considered the most important. The Linnæan system of botany represented this principle carried to an extreme degree, but it bore good fruit. Linnæus himself never intended his classification to be otherwise than artificial, and the minute independent study of a single organ led to the next phase of biology. Comparative analogy became a purely general science, in which hearts, lungs, gills, intestines, nerves, and genitalia, were the essential factors, whilst individual animals merely signified, to the scientist, some change or peculiarity in those organs. In fact, animals belonged to their viscera, not viscera to the animals in whose bodies they were contained. Who cared to dwell on a cat or a porpoise? There is a series of high flesh-eating organisms, where one living form has retractile claws and ear-bones differing from the same parts in another series, where the claws are fixed and the teeth quite different. The cat was the former type, but the nature of its claws was all that was wanted; nobody cared for its individuality. It is just this individuality that is being assiduously cherished, and its study encouraged by some of our best authorities, who have taken to write works on one particular animal. Professor Huxley has 'gone in' for the crayfish, and actually condescends to begin with some 'common knowledge' concerning that crustacean, which wiseacres would once have condemned as 'popularising science'. Mr. Mivart, in this valuable work on the cat, carries individualisation to an extreme degree. 'It is the invisible material entity which ever escapes our senses, but which is visible to our reason, which is more truly and emphatically the cat itself than is the matter of which it is composed.' This quotation shows at once the character of the entire work.

Mr. Mivart, in this handsome volume, writes all about cats, including domestic varieties, and the colours and markings of the different species of the genus *Felis*, in which the author retains the lion and the lynx, but separates the cheetah. The cat's anatomy is detailed rather after the fashion of Quain and Holden, than in the purely comparative tone of many living writers. We find so much about the ulnar artery and the anterior tibial, that it is, at times, hard to believe that we are not studying a manual for the hospital dissecting-room. In other words, the work is minute and thorough; and, when we remember what great advances have been made by the study of the mere general characters of animals, we cannot help thinking that deep and elaborate research of this kind will be productive of great results, and, indeed, inaugurate a new era in science.

Mr. Mivart gives us a chapter on the psychology

of the cat. This is far too deep for discussion here; but we need hardly say that the author treats the subject in a manner already made public, nor will the reader be surprised when we say that the chapter is otherwise than Darwinian, and is opposed to 'automatonism'. Huxley, disbelieving in any trace of 'mind' in the crayfish, says that we cannot solve the question without becoming crayfish; but, from inference, we may judge that the animal in question has no mind. Mr. Mivart parodies this assertion, but draws therefrom inferences absolutely opposite. The cat, he believes, has a soul, though not one 'capable of surviving the destruction of the body' (see p. 380). This assertion will be most pleasing to ancient vestalism, the traditional protectress of pussy, since it is, at the same time, comforting and orthodox.

In a very valuable chapter on extinct types of cats and allied carnivora, we find details of some of the interesting fossil forms recently unearthed by American geologists. Then follows another chapter, with a new term, 'hexicology'—meaning the relations of the cat to all its environments, physical, chemical, geographical, and even parasitic, as well as morphological. The chapter is of great merit and interest, and when we find that the cat has a mortal soul, and a large number of 'ancestral types', we must excuse new technical terms.

Mr. Mivart's work is at once minute, accurate, and readable; and the highest compliment we can pay to it, is earnestly to desire that other anatomists may follow his example, and write monographs on typical animals, which will restore to them much of the individuality of which they have been robbed by science, and, at the same time, prove invaluable as works of reference to those who study the anatomy of animals from a purely comparative standpoint.

Alban Doran.

Practical Papers on the Materials of the Antiseptic Method of Treatment. By George H. Beatson. Edinburgh: Maclachlan and Stewart. Glasgow: Alexander MacDougall. 1880.

The author published three papers during 1880 in the *Glasgow Medical Journal*, and he was influenced to do so by the fact that Mr. Lister's method has been presented as yet only in a disjointed and fragmentary manner. Indeed, the only authentic account, beyond Mr. Lister's papers in the various medical journals, is a short chapter by Dr. Bishop in Swain's *Surgical Emergencies*. Dr. Beatson therefore starts with the intention of giving a somewhat detailed and compact account of the materials used in Lister's method, and of the best method of using them.

The first paper deals with carbolic acid. About eight pages are taken up in discussing its chemical relations; and its uses in antiseptic surgery are discussed in one or at most two pages. The author advises absolute phenol for lotions, etc.; but he thinks that Calvert's No. 3 is sufficiently pure for the gauze. A few words are added as to the so-called carbolic urine, and it is pointed out that no relation exists between constitutional symptoms of carbolic poisoning and black urine; that, indeed the patient may be suffering from carbolic poisoning, and the urine be quite free from this dark colour.

In the other papers, the various material for antiseptic work are described, but throughout there is the same proportionate stress laid on the chemical and other characters of the materials, and on their uses in antiseptic work. Thus, in reference to the antiseptic gauze, the author begins by showing that the material called gauze is really not gauze, but fine cotton cloth, and to show this he enters into a description of the relations of warp and weft. He then passes on to the description of the manufacture of antiseptic gauze, and states quite correctly that it is impregnated with carbolic acid, resin, and paraffin. This gives him the opportunity of discussing the modes of obtaining resin, its various kinds and physical characters. In like manner, the history of the discovery of paraffin and its methods of manufacture, are given in detail. Fortunately, carbolic acid has been similarly disposed of in another chapter. When all these things have been described, no space is left for the description of the modes of using gauze in antiseptic work. And so, in the last paper, the history of the origin and progress of spray-producers is given at great length, and all sorts of machines are figured and described, but there is almost nothing said as to the how or when a spray is to be used, or what is to be done when no spray is at hand.

It is thus evident that the author has entirely failed in fulfilling his programme, viz., to supply a somewhat complete account of the details of the antiseptic system. We very much doubt whether there is nearly so much information in these papers as in Dr. Bishop's short account, which the author seems to regard as too meagre. It is a great pity that this is the case, for the author could evidently produce an excellent account of the system if he went properly about it. As these papers stand, however, without any index, and with the practical facts mixed up among a mass of unnecessary and tiring details, we very much doubt if they will prove to be of any practical value to those who are not already thoroughly acquainted with the system.

On Deafness, Giddiness, and Noises in the Head. By Edward Woakes, M.D. Second edition. London: H. K. Lewis. 1880.

The first edition of this book having not long since been reviewed in this Journal (Oct. 15, 1879), it is only necessary in noticing the present volume to allude to the additions which it contains. These comprise a chapter on adenoid vegetations, or, as the author prefers to call them, 'papillary growths' of the naso-pharynx, to the common occurrence of which, in this country, the present writer can testify. This is followed by a very interesting chapter on so-called 'paretic deafness', being a further elaboration of the author's papers on 'throat-deafness, associated with paresis of the palato-tubal muscles', which have appeared in the *Amer. Jour. of Otology*. *Apropos* of the frontispiece to the book (which represents the palate in health, and when affected with bilateral and with unilateral paresis respectively), we find no statement as to when the figures were taken, whether during quiet respiration, during deep inspiration, or in what condition. In our previous notice we remarked the only casual mention (in the chapter on giddiness) of vertigo associated with middle ear disease; the author alludes to this more fully in the present volume. A long article on Ear-sneezing, and some ingenious suggestions in regard to the causation of tinnitus, constitute the chief remaining additions.

On the whole, the added matter is of much interest, and considerably enhances the value of the work, although, be it remarked, it contains many

statements which, on account of their novelty, will require corroboration before they can be accepted as in accordance with fact.

E. CRESSWELL BABER, M.B.

The Relations of the Abdominal and Pelvic Organs in the Female. By Professor SIMPSON and Dr. HART. Edinburgh: W. and A. K. Johnston. 1881.

THE atlas contains a full-sized chromo-lithograph of the section of a cadaver frozen in the genu-pectoral position, and a series of woodcuts which illustrate the various contours of the female abdomen in the standing, sitting, and genu-pectoral postures. In the section, the uterus does not appear to have been struck in the median line, and so unfortunately the clearness of the illustration is diminished.

Professor Simpson describes a case of retroversion of an uterus, two and a-half months gravid, which was reduced by placing the patient in the genu-pectoral position, and distending the rectum with air by an ordinary Higginson's syringe. Another case of retroversion was reduced by placing the patient in the genu-pectoral position, distending the vagina, and drawing the cervix down by a volsella. The reduction of retroflexed uteri by distending the vagina in the genu-pectoral posture is an old method. It was employed some years ago by Dr. Oldham. Dr. Mundé, of New York, appears to regard it as new. The chromo-lithograph is remarkably well done, and reflects great credit on the publishers. In the illustration, the cadaver touches the horizontal line with the knees and face; it is, therefore, not genu-pectoral, but genu-facial.

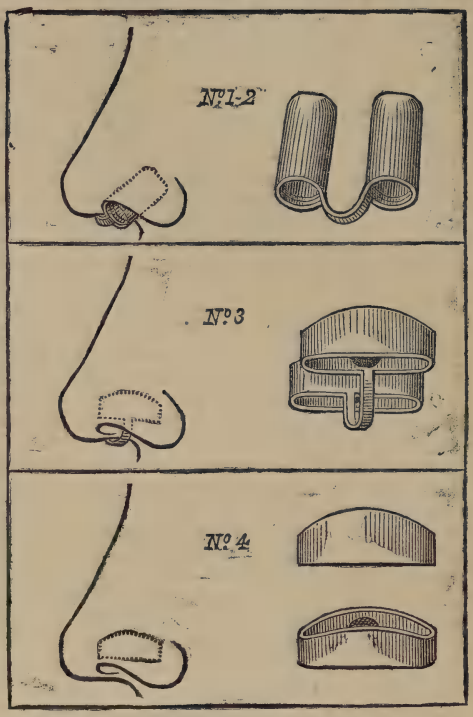
FANCOURT BARNES, M.D.

NEW INVENTIONS.

A PERMANENT INHALER.

This permanent inhaler, invented by Dr. Feldbausch of Strasburg, is useful as a new method of continuous or temporary inhalation of volatile substances by the nasal passages. By the fact of its application to the nose, it is specially distinguished from the apparatus hitherto employed, from cigarettes and other similar tubes, in which the air conveying the medicament must be aspired by the mouth. This buccal aspiration demands sustained attention, and soon becomes fatiguing, thus it is only applicable during a short time, and these apparatus cannot be employed for permanent inhalation, and are far from being capable of such general use as the permanent nasal inhaler, which allows of prolonged inhalation in a more simple and practical manner. This new apparatus is introduced only into the nostrils, which are the natural inlets of the air in the act of ordinary respiration. This fact allows of their being easily employed for hours together—even all day and night—without giving them any attention, and consequently, without bringing on fatigue, and without in any way interfering with the daily occupation of the wearer.

The permanent inhaler consists of a pair of tubes or capsules, which remain fixed by their own action in the nose, and contain a morsel of blotting-paper or flannel, intended to receive the medicament used. Three different kinds of them are made. The first form (Nos. 1 and 2) is composed of two tubes connected together, which, when applied to the nose, are scarcely visible, and not disfiguring. The action is more active than with Nos. 3 and 4, the evaporation surface of the blotting-paper being larger. This model is preferable in nasal catarrh, as it is easily removed in cases of sneezing or abundant secretion. No. 1, for men, is oval, and larger than



No. 2, which is for ladies and young persons. The second form (No. 3) consists of a pair of small capsules united together; is almost invisible, and, when *in situ*, nothing is visible but a fraction of the thin uniting link. The third form (No. 4) consists of two capsules, isolated one from the other, which can be introduced entirely into the nostrils so as to be absolutely invisible. The two latter models have smaller evaporating surfaces, and their activity is consequently diminished. The action, however, can be increased by moistening them more frequently with the medicating liquid.

Many volatile substances may be used with this permanent inhaler, both pure and diluted. Among them may be enumerated carbolic acid, balsam of Peru and of tolu, bromine, camphor, creasote, chloroform, oil of eucalyptus, of juniper, of pine, of turpentine, iodine, iodoform, nitrite of amyl, etc. The dose required may be administered with exactness—an important matter in narcotic substances—for it allows the inhalation of ether and chloroform in small doses, in the place of subcutaneous and internal applications.

The use of the permanent inhaler may be extended to the majority of diseases of the respiratory organs. In chronic catarrh, when it is not complicated or induced by profound changes of the tissues, or by constitutional maladies, and in phthisical patients, the inhaler may be usefully employed. It is also useful in diseases due to the inspiration of infected air, as it permits the inhalation of antiseptic substances. Nurses, medical men, and people obliged to remain in the same atmosphere as phthisical,

scarlatinal, and diphtheritic patients, will find it more useful to apply No. 4 inhaler, because it is invisible ; and patients also may use it for permanent inhalation.

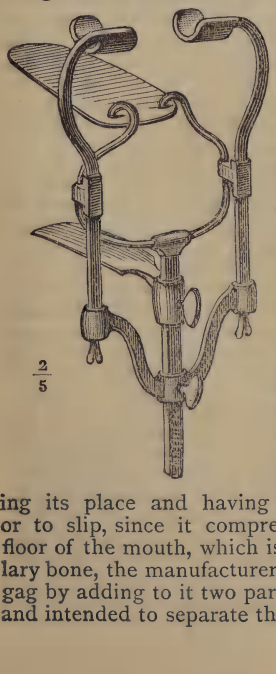
The permanent inhaler is used in the following way. By means of a drop-measure, the prescribed number of drops of the medicament required are dropped on the paper in the capsules. The apparatus is then placed in the nostrils, and respiration is carried on during the prescribed time. From time to time, deep and prolonged inspirations should be made. The frequency with which the medicine used should be renewed is regulated by the constitution and nature of the disease. Of carbolic acid, which volatilises, slowly as a rule, from two to four drops are sufficient for a moderately strong inhalation lasting one or two hours; but if the paper be additionally moistened, the inhalation may be continued during the entire night without needing renewal.

The apparatus should not be moistened outside by the liquor. If this should occur, it must be carefully wiped, so as to avoid any discomfort to the nose. It is also important that the paper should not be saturated so that the liquid drops from it. A deep inspiration might naturally cause it to penetrate into the nose.

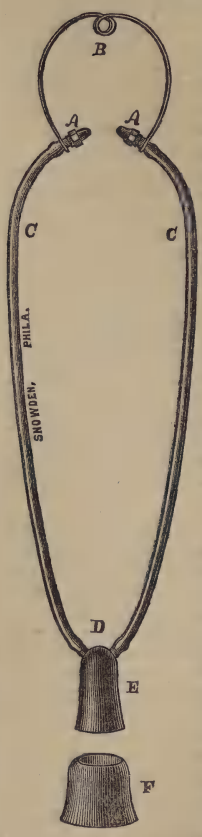
The invisible inhaler is completely hidden in the nose. To produce this effect, one end of it must be taken with the convex opening directed upwards ; the opposite end is pushed into the nose, directing it upwards and backwards ; then the anterior end of it is pushed towards the top of the nostril, until there is nothing left visible. To remove the inhaler, pressure is made from below upwards towards the tip of the nose until it falls out. The wholesale agent for the instrument is M. C. Jehl of Strasburg.

NEW TONGUE-DEPRESSOR.

A new tongue-depressor has recenily been shown at the Paris Société de Chirurgie, by M. de Saint-Germain, the inventor; the manufacturer being M. Mathieu fils of Paris. This instrument consists of a plate fixed on a kind of curved ring passing above the dental arch, and depressing the tongue without resting on the teeth. This ring is terminated by a stem, on which works an opposing plate, placed under the chin and intended to serve as a lever, forming a clamp with the first plate, so fixing the tongue without the aid of an assistant, and leaving the surgeon the use of both hands whilst depressing the tongue on the floor of the mouth. Taking advantage of this useful power of an instrument keeping its place and having no tendency to move or to slip, since it compresses the tongue and the floor of the mouth, which is thinner than the maxillary bone, the manufacturers have converted it into a gag by adding to it two parts mounted on a support and intended to separate the jaws by resting on the dental arch or the upper jaw. This instrument has, therefore, the advantage of being a gag which can be depended on, since it is fixed ; and of serving both as an ordinary and as a fixed tongue-depressor, from its being able to keep the tongue firmly depressed without any necessity for holding it.



SNOWDEN'S PERFECTED BINAURAL STETHOSCOPE.



This instrument is composed of a hard wood bell (E), with a soft India-rubber cup (F), two flexible rubber tubes (C C), attached to the upper portion of the bell by two perforated nipples at (D), two ear-pieces (A A), of hardwood covered with soft rubber pads ; the whole completed by a wire spring (B), so arranged as to retain the ear-pieces firmly in position when in use. The advantages claimed for this instrument are its simplicity, together with the perfection and accuracy of its acoustics.

The inventor especially calls attention to the following points. 1. The perforations in the bell at (D) are so gauged as to meet accurately at the centre of the dome. By this arrangement, the sounds are transmitted with equal clearness to each ear. 2. The rubber tubes are free from all woollen or silk coverings, thus avoiding all friction-sounds arising from this source. 3. The ear-pieces are covered with soft rubber pads, which effectually exclude all extraneous sounds. He states that it is the only stethoscope offered to the profession with soft rubber ear-pads. 4. The manner of applying the spring-pressure to the ear-pieces. 5. The ready adaptability to all positions of both the patient and the physician ; thus securing the comfort of both. The instrument is to be had of Mr. William Snowden, manufacturer and importer of surgical instruments and appliances, No. 7, South Eleventh Street, Philadelphia.

MISCELLANY.

Injection Brou.—The following is believed to be the formula of the much-vaunted gonorrhœal injection, of that name, taken from the register in the French public office : ℞. Zinc. sulph., gra. viij. ; plumbi acet., gra. xv ; tinct. catechu, ʒ j ; tinct. opii, aquæ, āā ʒ iij.

Johanson on Bacteria.—This author, following up a paper on the action of certain antiseptics on the bacteria of animal fluids, states (*Pharm. Zeits. für Russland*, 1880, No. 24), that bacteria bred in vegetable infusions are very variously affected by antiseptics, according to their source and the fluid in which they are propagated. The results, therefore, obtained from experiments on these cannot be transferred to medical practice. Also, all disinfectants to

be tested ought to be tried on as many different varieties of bacteria, propagated in as many different methods as possible.

THE FRENCH ZOOLOGICAL STATION AT ROSCOFF.—The zoological station at Roscoff, on the coast of Finisterre, established in 1872 through the initiative of M. de Lacaze-Duthiers, has made remarkable progress. At first merely a primitive aquarium under a shed at the side of a garden wall, it has grown into a well-equipped station, which last August afforded lodging and working accommodation to 17 workers at once. The number of workers in 1872 was three, in 1880 it was 27, and the total number from the commencement is 114. On the 77 in 1880, some came for an educational purpose and to prepare for degrees, others for original research. Seven of the number were foreigners —viz., three English, one Dutch, one Belgian, one Swiss, and one Greek. A salaried keeper now stays at the station all the year, and sends live animals for laboratory demonstrations to Paris and other educational centres in France. Workers come to the station in greatest number, of course, in vacation time, August and September, but at all seasons of the year accommodation is offered. Among other arrangements, a portion of the beach has been enclosed as private property, so that the removal of algæ may be prevented, and a number of large flat stones have been conveniently placed there for shelter of animals. The station now owns a strong vessel, Le Dentale, in which one can go well out to sea for dredging purposes, and a diving dress is about to be provided. M. Lacaze-Duthiers has been looking out for a suitable position for another station on the Mediterranean, and has chosen Port Vendres, where there is hope of acquiring for zoological purposes some abandoned military buildings on a peninsula. When this station is founded, summer studies at Roscoff may be continued and completed in winter at Port Vendres.

THE INTERNATIONAL MEDICAL AND SANITARY EXHIBITION.—The allotment of space to intending exhibitors is now being rapidly proceeded with, and at the meeting of the Committee on Wednesday last (April 6th) the names of 225 exhibitors were registered and approved as follows: Medical Section, 115; Sanitary Section, 94; Miscellaneous Section, 16. In addition to the wall-space and counter-space taken, upwards of 1,200 ft. frontage of floor-space will be allotted to the above exhibitors, representing an area of no less than 8,000 square feet. This area will be occupied by articles which come strictly within the object of the exhibition, the Committee having refused all applications for exhibiting curiosities, etc., which too often are added to exhibitions for the purpose of making them more attractive to general visitors without regard to the primary object aimed at. The Executive Committee of the Parkes Museum of Hygiene may certainly be congratulated on the success which has thus far attended their efforts to organise the first International Exhibition of Hygiene that has been attempted on so large a scale. The list of exhibitors already includes the leading manufacturers in Great Britain and Ireland, in connection with the medical industries and the industries connected with architecture and sanitary engineering, and important exhibits are announced from France, Germany, Austria, Italy, Belgium, Holland, Norway, and the United States. The Committee have decided, in order to meet the convenience of intending exhibitors, to extend the time for receiving applications for space, which may now be sent in up to Saturday, April 16th. An index of exhibitors and articles to be exhibited is being printed and will be published for distribution while the descriptive catalogue is being compiled, and, as soon as the whole of the space is allotted, a plan of the Exhibition Buildings at South Kensington will be published, with the names of the exhibitors on the space allotted them. Heating, lighting, cooking, ventilating, and water-supply apparatus and appliances will be shown in action. Surgical instruments, microscopes, and medical appliances of every kind are included in the list of exhibits. The guarantee fund now amounts to £1,082. The list of judges, by whom certificates of merit will be awarded, consists of seventy-four leading scientific men and members of the medical, architectural, and engineering professions. Inquiries should be addressed to the Secretary, Mr. Mark H. Judge, at the Parkes Museum of Hygiene, Gower Street, W.C.

WANIKA.—In the *Pharmaceutical Journal* of April 9th, Mr. A. W. Gerrard gives an account of wanika, a new African arrow-poison. It appears that recently Dr. Sidney Ringer received from Mr. Robert W. Felkin, a gentleman who has been travelling in Africa, through Livingstone's territory, specimens of an arrow-poison, together with a poisoned arrow and some specimens described as the antidote to the poison. These were placed at Mr. Gerrard's disposal, and he entered upon an investigation of their properties and composition. The poison with which the barb of the arrow is smeared is enveloped in the leaf of a variety of grass or maize, the entire parcel in size and form being much like a sausage. Its length is 4½ inches, and circumference 3 inches. At each end it is tied with a strong ligature, one end of the ligature being carried about an inch down the parcel, turned at right angles, and passed round its circumference, then looped; this is repeated four or five times, until the other extremity is reached, and firmly tied. Its weight averages 1½ ounces. On breaking a parcel, a black extract, of firm consistence and almost odourless, was found in its interior. The arrow is made in two pieces, fitting together by a socket, situated about 4 inches from the barb. The barb is of iron of native manufacture. The object of the arrow being in two parts is, that when a man is struck the barb may not easily be withdrawn. The antidote is stated to be made from five roots. The proper proportion of each was given to Mr. Felkin, together with a porcupine-quill. The roots have been submitted to Professor Oliver, who reports that he is unable to give any information as to their botanical source. The quantity of each root was much too small for a pharmaceutical investigation. To prepare the antidote, the roots are converted into charcoal, which is coarsely powdered, and preserved by being placed in a bottle-shaped gourd. When a warrior is wounded, he makes a special whistling noise, and the medicine-man, who is usually hiding amongst the trees, approaches, and gives the antidote mixed with honey.

THE MONTYON PRIZES.—The Montyon prizes for 1880 have been awarded by the Académie de Médecine of Paris, so far as they concern medicine and surgery, as follows: Three prizes of the value of 2,500 francs (£100) each: 1. To Professor Charcot, for his work on Localisation in Diseases of the Brain; 2. To M. Louis Jullien, for his treatise on Venereal Diseases, and his Statistical Researches on the Etiology of Tertiary Syphilis; 3. To M. Sappey, for his writings on the Lymphatics of Fishes. Three honourable mentions, 1,500 francs (£60), have also been awarded: 1. To M. J. Chatin, for his work on the Organs of Sense in the Animal Kingdom; 2. To M. Grehaut, for his three memoirs on (*a*) the method of Elimination of Carbonic Oxide; (*b*) on the Absorption of Carbonic Oxide by the living organism; (*c*) Comparative Researches on the Exhalation of Carbonic Oxide by the Lungs, and on the Variations of that function; 3. To Dr. Guibout, for his new Clinical Lectures on Skin-diseases. The Bréant prize of 5,000 francs was awarded to Professor Colin of Alfort for his experiments on Septicæmia and Charbon; the Godard prize, to Dr. Paul Ségond, for his work on Acute Abscesses (*abcès chaud*) of the Prostate, and on Periprostatic Inflammation. The Dugsate prize, of the value of 2,500 francs (£100), for the best memoir on the Diagnostic Signs of Death, and of preventing premature inhumation, has not been awarded this year; but the Academy has given an 'encouragement' of 1,000 francs (£40) to Dr. Onimus; another of the same amount to M. Peyraud; and one of 500 francs (£20) to M. G. Le Bon. The Boudet prize of 6,000 francs (£240 sterling) has been awarded to Mr. Lister, F.R.S., for his labours in the cause of antiseptic surgery.

The London
Medical Record.

BINZ, JANSEN, AND HAGENBACH, ON TANNATE OF QUININE IN WHOOPING-COUGH.

In 1867, Binz (*Berl. Klin. Woch.* No. 9, 1881) was induced on theoretical grounds to employ quinine in the convulsive cough of children, other drugs having frequently failed in his hands to give relief. He found it most effectual in alleviating the violence and duration of the paroxysms of whooping-cough. The attacks became less frequent and less severe, and the vomiting ceased. When quinine was given quite at the commencement of the illness, the spasmodic element was suppressed, and the attack assumed the form of a severe, though manageable bronchitis. To obtain these good results, is is necessary to give the remedy with no sparing hand. Twice a day the patient must take as many decigrammes as he is years old (a decigramme is a grain and a half), so that a child four years old would require 6 grains at a dose; at ten years of age he would want 15 grains; at fourteen, 21 grains, and so on.

The treatment must be steadily persevered in, for no immediate effect is observed. As a rule, there is no improvement until the patient has taken the full dose for three or four days, but then the progress is rapid. These results have been confirmed by one of Binz's pupils, Jansen (*Klin. Beiträge zur Erkenntniss und Heilung des Keuchhustens*, 1868), and by Hagenbach (*Correspondenz. für Schweizer Aertz.*, 1881, and Gerhardt's *Handbuch der Kinderkrankheiten*, 1877), who, as director of the Children's Hospital at Basel, has had many opportunities of investigating the subject. Hagenbach considers that, in the treatment of convulsive cough, quinine must be awarded the foremost place. The difficulties—at times insuperable—of inducing children to take such a bitter medicine as quinine, have been overcome by using the tasteless tannate of quinine. During a severe epidemic of whooping-cough in the neighbourhood of Rheindorf, Dr. Becker used this preparation with the greatest success. Hagenbach, in corroborating Becker's statements, says that it is best to give the tannate of quinine as early as possible, the dose being twice a day as many decigrammes as the child is years old. In his experience, the attacks have in a few days considerably abated, and the vomiting has ceased. He also used it with considerable success in the ordinary catarrhal affections of children. It is best given in a little sugar and water. In only one case did it induce constipation, whilst, in another, it arrested an attack of diarrhœa. Unfortunately, tannate of quinine is a very uncertain preparation, containing at one time 10 per cent., and at another 25 per cent., of the alkaloid. On this account it is a good plan to use the neutral tannate of quinine, made by precipitating the alkaloid with tannate of ammonia. The great objection to the employment of these salts is their expense, but there is good reason to suppose that they will soon be obtained by a new chemical method at a more reasonable rate.

It would appear that quinine produces its beneficial effects by a specific action on the organism which causes whooping-cough; salicylic acid and carbolic acid acting in the same way. Chloral-hydrate probably acts by lessening reflex action, and we know that its effects on the spinal cord are so marked that it is used as an antidote in cases of strychnia poisoning. The great objection to chloral in whooping-cough is, that it soon loses its effect unless the dose be increased. With quinine this is not the case; and, although it acts slowly, it is certain. It exerts no direct action on the nerves, but gradually destroys the poison itself. No hesitation need be felt in increasing the dose of tannate of quinine if necessary.

William Murrell, M.D.

HART ON CORPUSCLE-COUNTING AND THE ESTIMATION OF HÆMOGLOBIN.

No method of clinical investigation has of recent years come more rapidly into general use than that of the enumeration of the blood-corpuscles; and this is due to the extreme practical value of such observations in guiding the diagnosis, prognosis, and treatment of anæmia. Following the original indications of Vierordt, various instruments have been devised for the purpose of counting blood-corpuscles, notably those of Malassez, Hayem, and Gowers. The hæmacytometer of Gowers (which is the instrument in most frequent use in this country), though in some respects an improvement on its predecessors, gives results which are by no means trustworthy. To indicate precisely the sources of error in Gowers' instrument, and, at the same time, to describe a much more satisfactory apparatus which Malassez has recently devised, is the purpose of an elaborate and valuable paper by Mrs. Ernest Hart, which appeared in a recent number of the *Quart. Jour. of Micros. Science*, vol. xxi, new series. The four serious sources of error to which Gowers' instrument is liable, and which destroy the value of observations made with it from a scientific point of view, are stated to be as follows. Firstly, the depth of the cell varies, and troublesome corrections have to be made in the subsequent calculations. Secondly, there is a constant error caused by inequality in the surface of the cover-glass; these glasses are rarely of uniform flatness, being either of a slightly convex or concave form, thereby altering the depth of the layer of fluid at different points. Thirdly, the mode of applying the cover-glass to the cell is faulty, disturbing the uniform diffusion of the corpuscles through the fluid; and, lastly, in the method of mixing and placing the drop on the cell, the red and white corpuscles are apt to be irregularly deposited. In Malassez's new instrument (*compte-globules*) these errors are eliminated. It can be used clinically with any microscope. The squares are drawn on the floor of the cell, the depth of the cell is very carefully regulated, the covering glass is lowered by means of an ingenious rack-movement, and the blood is mixed in Potain's *melangeur*. But corpuscle-counting is only one stage in the investigation of the blood. The author of this interesting paper describes, farther, the various methods for estimating the quantity of hæmoglobin present, and that not merely the amount per cubic millimètre, but the proportion contained in each corpuscle. For the details of this calculation, alike interesting and clinically important, the original paper must be consulted. The value of such refined methods of investigation may be inferred from such a case of

chlorosis as one quoted by Malassez. Under treatment considerable improvement occurred, the actual number of corpuscles per cubic millimètre diminished, the amount of hæmoglobin per corpuscle, however, almost doubling in the same time.

Subsequently to the publication of the paper just referred to, there appeared the Gulstonian Lectures on Anæmia by Dr. Coupland, in the first of which (*British Medical Journal*, March 19th, 1881) the same subject is discussed, and weight is likewise laid upon the fact that not only must the corpuscles be enumerated, but the corpuscular richness of the blood must be stated in terms of hæmoglobin. This whole subject, in its recent developments and scientific refinements, is worthy of the close attention of all clinical observers.

J. GRAHAM BROWN, M.D.

HAMILTON ON CATARRHAL PNEUMONIA AND TUBERCLE IN THE HUMAN LUNG.

IN a series of papers in *The Practitioner*, Dr. D. J. Hamilton reviews this subject. The following is a synopsis of the main conclusions at which he has arrived.

1. Croupous pneumonia and catarrhal pneumonia are two totally different diseases, and ought not to have a common designation. Croupous pneumonia is merely an exudation of blood-constituents due to suddenly increased blood-pressure, while catarrhal pneumonia essentially consists in the over-stimulation and proliferation of the epithelial cells lining the alveolar walls.

2. Catarrhal pneumonia runs through three distinct stages: *a*, the acute or subacute; *b*, the caseous; and *c*, the excavating. The disease usually passes through all these in adults, but in children frequently proves fatal in the first or second.

3. In the acute stage the alveolar epithelium proliferates, and the cellular products derived from this process accumulate in the air-vesicles.

4. In the second stage these dry and become caseous, thereby losing their characteristic form.

5. In the excavating, or third stage, the necrotic caseous material softens, and this softening is a purely chemical process, corresponding to the 'ripening' of cheese.

6. When tubercle occurs in the lung, or in any other organ, it is always preceded by a caseous source of infection. This infecting source may be situated in the lung itself, or in some distant part. When situated in the lung itself, the tubercle is the secondary disease (secondary tubercle); but when in a distant part, the tubercle is the primary disease of the lung (primary tubercle).

7. The caseous virus in these two varieties is carried by a different set of vessels. In the secondary, it is transported by means of the lymphatics, and the tubercles have merely a local distribution. In the primary, it is conveyed by the blood-vessels, and in this case the tubercles are distributed generally, and usually throughout both lungs.

8. A tubercle, in all cases, when fully developed, consists of the following parts: one or more giant-cells, a surrounding reticulum formed by their processes, and a peripheral capsule.

9. The chief infecting sources of secondary tubercle of the lung are catarrhal pneumonia and interstitial pneumonia, accompanied by bronchiectasis. In both of these caseous matter is developed, and, being absorbed, excites the formation of tubercle in the surrounding connective tissues. The main causes of primary tubercle of the lung are softening cheesy glands and strumous abscesses.

10. Tubercle is liable chiefly to two degenerations. The commoner is the caseous. The other is the conversion of the whole of the tubercle elements into fibrous tissue, and it is to be looked upon more in the light of the natural termination of tubercle development than as a degeneration. When it occurs extensively, it produces cirrhosis of the part.

11. Tubercle, under any circumstances, is a connective-tissue growth, arising from the action of an acute irritant. The irritant is probably a ferment, generated in the softening of a caseous mass.

12. The hereditary tendency to phthisis is probably owing to an abnormally great susceptibility of the pulmonary epithelium to irritation. This seems to be borne out by the fact that, as persons advance in life, and when naturally epithelial cellular structures become more stable, the tendency to attacks of catarrhal pneumonia diminishes.

13. There is a form of catarrhal pneumonia in which the nodules are of small size, and are widely disseminated throughout the organ. It closely resembles tubercle in its naked-eye characters, but it is totally different from it in its actual structure and mode of development.

AFANASIEFF AND OTHERS ON THE TREATMENT OF ENTERIC FEVER BY PROLONGED LUKEWARM BATHS.

FOR many years, the reduction of the pyrexia of fevers by cold or lukewarm baths has been the subject of careful and extended inquiry both in this country and in Germany. Among those who have done much useful work in the investigation are Brand, Ziemssen, and Riess, while Dr. Wilson Fox's accurate and interesting observations on the reduction of the pyrexia of acute rheumatism have added much to our precise knowledge of the immediate and subsequent effect of such baths. The methods of the first three observers differ considerably. Brand uses largely, and more especially in severe cases, the general cold bath, cold affusions, and cold wet packings, the water being at a temperature of 50 deg. Fahr., and the affusions being continued for a quarter of an hour or thereby. Ziemssen's method consists in placing the patient in a bath at 95 deg. Fahr., which, in the course of half an hour or thereby, is gradually cooled down to 60 deg. Fahr. He uses the cold wet packing as an adjuvant to the baths.

Riess's method (*Centrabl. für die Med. Wissen.*, July 24, 1880, p. 545) differs from both these in the duration of the bath, and also in the fact that the water is kept at a constant lukewarm temperature. His procedure is as follows. On the day succeeding the admission of a typhoid patient with high temperature, he is placed in a bath at 88 deg. Fahr. for twenty-four hours. The duration of the bath in the following days depends on the rectal temperature. So soon as the temperature reaches 101.5 deg. Fahr. the patient is placed in the bath, which is interrupted at 99.5 deg. Fahr., until the temperature again rises to 101.5 deg. Fahr. Riess claims for this treatment that it not only keeps the temperature in typhoid patients almost normal, but also that, under it, delirious and comatose patients return to full consciousness and gladly remain in the bath.

Notwithstanding the excellent results obtained by

Riess, few test trials of this method have been published, and accordingly the detailed observations by Afanassieff (*St. Petersb. Med. Woch.*, 1881, No. 7) of seven cases of enteric fever, treated by prolonged lukewarm baths, are possessed of some interest. In certain respects, Riess's method was not fully carried out. From circumstances of hospital convenience the baths lasted in general only three hours, being repeated twice daily if necessary, that is, if the rectal temperature rose above 101.5 deg. Fahr. Sometimes, also, the baths were of a higher temperature than 88 deg. Fahr., in one or two cases as high as 95 deg. Fahr. As to the general course of the disease in these seven cases, two were specially severe, but in none was the 'typhoid' condition developed. Consciousness was clear, headache slight or absent, and sleep good throughout the whole period of the use of the baths. The tongue was seldom coated, mostly clean and moist, and all the patients preserved a good appetite throughout the disease. Pain in the region of the cæcum and meteorism were generally present, but required no special treatment. Marked diarrhœa was not present in any of the cases, and the bowels were regularly and naturally opened. Two cases had bronchitis, passing over without treatment. The number of baths given was 114, of which 100 lasted three hours; 14 a longer or shorter time. As regards reduction of temperature: on two occasions the reduction was 5.8 deg. Fahr.; on seven, approximately, 5.5 deg. Fahr.; on twenty-one, 4.5 deg. Fahr.; on thirty-four, 3.5 deg. Fahr.; on twenty-four, 2.5 deg. Fahr.; on twenty-three, 1.5 deg. Fahr.; and on three, 1 deg. Fahr. The last two classes were mostly those in which the baths lasted for only half an hour or an hour, the rectal temperature being only 101.5 deg. Fahr. The temperature was taken in the rectum before and after the bath; and we must here note a practical point of which the observer seems to have been unaware. The temperature immediately after a bath by no means necessarily indicates the reduction of temperature accomplished by it; for Dr. Wilson Fox has shown, from his cases of acute rheumatism, that the temperature may continue to fall six or more degrees, forty or fifty minutes after the termination of the bath.

The conclusions arrived at by the observer are these. 1. The usual reduction is from 3 deg. to 4.5 deg. Fahr. 2. In the later stages of enteric fever, the temperature yields more readily than at first. 3. The temperature sinks more readily in the evening than in the morning, the greatest reduction in the evening among his cases being 5.8 deg. Fahr., while the greatest in the morning was 4.5 deg. Fahr., both these meaning, however, a reduction to almost the normal temperature. The pulse and respirations also sank in number under the use of the bath. The fall in the pulse was in strict relation to the fall of temperature, the diminution being 20, 50, and in some cases even 70 and 90 per cent. The author considers the treatment well suited for hospital cases, and points out that the attitude of the patient in the bath ought to be as comfortable as possible, for which he recommends a waterproof mattress, covered with a sheet, and a movable pillow attached to the frame of the bath.

James Anderson, M.D.

BILLROTH AND WÖLFLER ON RESECTION OF THE STOMACH.

Resection of a portion of stomach for cancerous disease, an operation to which much attention has recently been directed by Billroth, seems to have been first proposed by Gussenbauer and Winiwarter, and was practised in the first instance by Péan, whose patient died on the fifth day. In the second case, treated by Dr. Rydygier of Kulm, a carcinomatous tumour of the pylorus was extirpated in November last. The patient was an old man, who had been much exhausted by vomiting and inability to retain sufficient nutriment. The operation, which lasted for four hours, was followed by death from collapse in twelve hours. On *post mortem* examination, it was found that the whole of the cancerous disease had been removed, and that there were not any metastatic growths in the other abdominal organs.

Since the beginning of the year, Professor Billroth has performed resection for gastric carcinoma in three cases. The subject of the first, a successful case, was a woman, aged 43, who presented clear symptoms of cancer of the stomach, and had been much exhausted through constant vomiting, and hæmatemesis and melæna. In the region of the pylorus was a large movable tumour. The operation was performed on January 29th. The incision in the thin abdominal wall was made on the right side, just above the tumour, parallel to the margins of the false ribs, as in the operation of gastrostomy. The growth was then seen covered by omentum, and adherent to the transverse colon. After it had been separated from these structures, and an enlarged gland had been excised, Billroth made out that the disease involved the pylorus and a considerable portion of the fundus of the stomach. Sutures having been passed into the stomach above the disease, and brought out through the coats of the duodenum, the walls of the stomach were then cut through near the middle of the organ, and the duodenum was divided just below the pylorus, and beyond the limits of the tumour. The patent extremities of the divided stomach and duodenum were then brought together by the sutures that had been previously passed. The larger calibre of the remaining portion of the stomach, as compared with that of the extremity of the duodenum, was considerably reduced by contraction of the gastric walls, and by a folding inwards of the coats of the viscus along the course of the greater curvature. The duodenal and gastric open extremities could then be brought together, and applied the one to the other without difficulty; and, after the application of sutures, there remained a very small and narrow but yet freely permeable stomach. The edges of the incision in the abdominal wall were then brought together by sutures, and the wound covered by antiseptic dressing. No attempt was made to drain the seat of operation. The patient did well after the operation. On the third day she took food by the mouth. The sutures were removed from the abdominal wall on the eighth day.

On February 25th, Professor Billroth made the following remarks on this case at a meeting of the Imperial and Royal Medical Society of Vienna (*Wiener Med. Woch.*, No. 10, 1881). 'What could have been done if a direct connection of the two divided portions of the digestive canal had proved impossible? Czerny, it is true, has extirpated the whole of the stomach in the dog, and stitched the

cardia to the pylorus, the animal, to the astonishment of physiologists, continuing to live, notwithstanding the abolition of gastric digestion. In my case, the only course open to me would have been a stitching of the remaining portion of the stomach, and of the duodenal opening, to the margins of the abdominal wound, in order to form an artificial opening for the introduction of nutriment; in fact, an artificial mouth. During the first twenty-four hours after the operation, the patient took nothing save some ice. During the six weeks preceding the date of operation she had vomited constantly after taking food, and passed no stool, as the pylorus was almost completely closed. On the third day after the operation she took some sour milk, which kind of food she had formerly been accustomed to take. Shortly afterwards, the tongue became very white, and I feared some aphthous deposition. We then gave her soup and eggs, which at first were not well tolerated. At this time she was restless and depressed, and suffered also from a large bed-sore, and, in dread of vomiting, could not be induced to take much nutriment. Early in the second week, the first change was made in the diet. Although she had hitherto taken but fluid nutriment, she had passed very large quantities of firm fæces of a clear yellow colour, and resembling the stools of a suckling infant. After she had commenced to take solid food, this condition improved, and from the tenth day the appearance of the fæces indicated that the stomach was again performing its functions. At the present time (February 25th), this patient is in good health. She has returned to her domestic duties, and our chief care consists now in supporting her by the most suitable diet, and in closing the bed-sore.

'The question whether the gastric surface, when thus reduced by nearly one-half, is sufficient for maintaining life and the strength of the subject, may now,' Billroth states, 'be positively settled. This woman has certainly gained flesh; her appetite is good, and the defæcation normal. It may be a question also whether the cicatrix will remain firm—whether it may not, sooner or later, yield to the digestive action of the gastric juice. About three years ago, I closed a gastric fistula by sutures, after having exposed the stomach; and I have learnt very recently that the subject of this case still remained in good health. If a gastric ulcer heals, and can still resist digestion, although it is covered only by cicatricial tissue, and not by mucous membrane, why should not the case be the same with a cicatrix resulting from stitching?'

'It seems, *a priori*, extremely probable that the calibre of the digestive canal at the seat of operation will gradually contract, and that this contraction will in course of time result in serious stenosis. This question also may be settled by the results of three cases in which I have performed enteroraphy.' Though more than twelve months has elapsed in each of these instances, all three patients, Billroth states, are now in good health, and able to take their ordinary diet without any disturbance of digestion.

'With regard to the possibility of a relapse,' Billroth states it as his belief, 'that, if the operation be practised at the proper time, the extirpation of the carcinoma will be radical.' The patient in this case has improved very much since the date of operation, and has not suffered again from pain or vomiting. The removed growth was found on examination to be an infiltrating colloid carcinoma.

On February 28th, Billroth performed resection in a second case of carcinoma of the stomach. The patient was a very anæmic woman, aged 39, who had suffered from gastric disturbances for seven months. During the seven weeks preceding the date of operation, the symptoms had indicated carcinomatous disease of the stomach; but, as an absolutely certain diagnosis could not be made, Billroth began with the object of performing merely a 'diagnostic incision', which procedure soon led to one of typhoid gastric resection. The disease proved to be an ulcerating medullary carcinoma of the pylorus, which had involved part of the anterior wall of the stomach, and excited a circumscribed adhesive peritonitis, in consequence of which the viscus was closely bound to the surrounding structures, especially to the anterior wall of the abdomen. Through this condition, the operation was attended by much difficulty, and lasted over two hours and three-quarters. The diseased portion of the stomach was resected, and the divided segments of the digested tract brought together by forty-eight sutures. The resected portion included the whole circumference of the pylorus, and a portion from the greater curvature, measuring about four inches in length, and about two inches and three-quarters in breadth. Another difficulty complicating this operation was a condition of extreme dilatation of the stomach, so that it was found impossible beforehand to completely empty and wash out the viscus, as in the former case; and it was necessary, after incision, to remove the remaining gastric contents by means of sponges.

Notwithstanding the complications, the operation was not followed by any symptoms of acute peritonitis. During the first four days, the patient progressed favourably, without elevation of temperature, or any serious increase of pulse. During this period there was but one attack of vomiting, which occurred on the morning of the second day. Subsequently, however, vomiting became frequent; every administration of nutriment, whether solid or fluid (sour and sweet milk, coffee, soup, wine, minced meat), and tried with many combinations, was invariably followed in the course of three or four hours by rejection of the food, mixed with very sour and bile-stained gastric juice. As there was a complete absence of symptoms of peritonitis, Billroth was led to attribute this obstinate vomiting to some mechanical obstruction to the passage of food from the stomach into the duodenum; and this obstruction, he concluded, was due to a kind of bend in the digestive canal near the seat of operation. It was thought, also, that the stomach, in consequence of its previous condition of extreme dilatation, had no longer sufficient contractile force to overcome this obstruction. On the sixth day after the resection, the abdominal wound was reopened, with the view either of removing any mechanical obstruction, or of establishing a duodenal fistula. The stomach, again found extremely dilated, was opened. There was a slight bend in the duodenum, but the passage was quite free. In consequence of the extreme prostration of the patient, no attempt was made to re-establish the digestive canal. The wall of the stomach was fixed by a few sutures to the wound in the abdominal wall, and a wide tube was inserted into the duodenum for the introduction of nutriment. Death resulted from exhaustion and inanition thirty hours after this operation, and on the eighth day from the date of the resection. In a short paragraph on the results of the *post mortem* examination, it is stated

that there was a complete absence of traces of general peritonitis.

This case, like the former, proves that the operation for resection of cancerous disease of the stomach, if performed with strict antiseptic precautions —the use of the spray, however, it is stated, being excepted—is attended with as little danger of general peritonitis as any other kind of laparotomy practised under like conditions. It was found, in the second case, that the extirpation of the disease had been complete, as the mesenteric glands were found intact. Billroth proposed, in any future operations of this kind, to fix the duodenum to the greater instead of the lesser curvature of the stomach, in order to take advantage of the more favourable mechanical conditions for the passage of food from the stomach into the small intestine.

Professor Billroth performed his third excision of the stomach on Saturday, March 12th, in the presence of Professors Duchek, Dittel, Weinlechner, Salzer, Mosetig, etc.

The patient, a woman aged 36, had presented signs of cachexia dependent on the existence of cancer of the stomach, and its attendant sufferings, for about one year. The tumour could be distinctly felt, and was movable. On the advice of Dr. Wölfler, the plan of operation was slightly modified from that followed in the previous cases, the stomach and duodenum being sutured together, so that the duodenum joined the stomach at its greater curvature, thus at a rather more dependent point; this being done with a view to facilitating the passage of food from the stomach. By reason of the difficulty of passing Lembert's suture in the regular way through the posterior wall of the stomach and duodenum, another slight modification was suggested by Dr. Wölfler. This consisted in passing the stomach sutures from within outwards, *i.e.*, from the mucous surface; care, nevertheless, being taken to bring the peritoneal surfaces into contact. The freeing of the great and small omenta from the stomach took somewhat longer than in the previous cases, and some difficulty also was experienced in dividing an adhesion which had formed between the stomach and pancreas. Before completing the suturing, the operator convinced himself of the patency of the new pylorus. The dilatation of the stomach in this case was less marked, but a larger piece of wall was removed than in either of the other two.

Unfortunately, the result of the operation was again unfavourable, the patient dying from exhaustion in about twelve hours. The case, however, showed that the two modifications above described lessen the difficulty of excising a carcinomatous pylorus.

Another and a successful case has still to be added to this list. On April 8th, Dr. Wölfler, assistant to Dr. Billroth, performed resection of a cancerous pylorus on a man aged 52. The case was regarded as favourable for the proceeding on account of the mobility of the tumour, which was apparently about the size of a hen's egg. The operation, which lasted two hours, was not followed by fever nor by vomiting, and the patient was able to take fluid food two days later. On the tenth day, he ate, with good appetite, a veal-cutlet; and, a fortnight after the operation was in a most satisfactory condition. The wound in the abdominal wall had healed by first intention, and without any constitutional disturbance.

W. Johnson Smith.

NOEGGERATH ON A 'NEW METHOD' OF PERFORMING OVARIOTOMY.

At a meeting of the Medical Society of the County of New York on January 24 (reported in the *New York Med. Gaz.*, March 1881), Dr. E. Noeggerath read a paper, the substance of which was as follows. The results of operations for the removal of ovarian tumours have become so satisfactory, that success is the rule, failure the exception. The question arises, whether it would not be advisable to continue in the beaten track. It would, however, be better to attempt to lessen still more the deaths following ovariotomy.

The question of antisepsis is a moot one with respect to its observance during ovariotomy. Some consider it as an experiment only, and urge the success of former ovariotomists; but the degree of success attained was in proportion to the care taken to insure cleanliness, and antisepsis is nothing but a superior method of effecting this object. Dr. Noeggerath does not see how a doubt can exist as to the advisability of antisepsis. One of its advantages is that patients now recover in the hands of inexperienced operators, who never would have recovered without it. The aim should be to surround the operation with such safeguards, that unskilled surgeons may perform it without danger. Patients to be operated upon should be sent to places insuring the best hygienic surroundings. Isolation wards or cottages are admirable safeguards against septic infection. Dr. Noeggerath believes that it is possible to make a room in a dwelling or hospital as salubrious as a cottage. If possible, he selects two rooms, if not one, on the first floor, and removes all the furniture, carpets, etc. Then the floor and walls are to be washed with a two and a half per cent. solution of carbolic acid, and vessels containing chlorine water are placed about the room. The water-closet, if any, is to be sealed up. The mattrass is to be aired; the bedding, etc., washed in a solution of carbolic acid. The furniture of the room should consist of a chair, iron bedstead, and wooden table. The room should be heated by an open fire-stove, and a kettle containing carbolic acid solution should be suspended near the fire. The adjoining chamber is exposed to the air night and day.

If everything be prepared as directed, and the rules of antisepsis be observed, hæmorrhage, shock, and septicæmia, which are the most frequent causes of death, have yet to be guarded against. About hæmorrhage, there is nothing new to say. Shock is equivalent to loss of temperature, as has been proved by experiments on animals. The elements of shock are—prolonged vomiting, contact of the fingers and instruments with the abdominal contents, and the influence of narcotism. After a trial of several narcotics, Dr. Noeggerath has returned to the use of chloroform. The patient takes a drachm of bromide of potassium on each of the two days preceding the operation, and, on the morning of the operation, thirty grains. By this method, less chloroform is required to produce narcosis. He also gives a full dose of chloral by the rectum, which further diminishes the danger.

It has been the custom to perform ovariotomy in a warm moist atmosphere, as guarding against peritonitis. Instead of this, Dr. Noeggerath places his patients on an India-rubber bed filled with water heated to 100 deg. This dry heat is, he finds, much less depressing and more convenient of application more easily regulated, than the moist heat.

A third danger connected with ovariotomy lies in the formation of septic material in the abdominal cavity. This danger would be lessened by adopting a method by which the air, and hands, and instruments are in contact with the peritoneum a shorter time than by the present plan of operating. It is such a method as this that is followed by Dr. Noeggerath. He raises the skin and subcutaneous tissues to the extent of about three inches; but, instead of cutting through the peritoneum, he plunges the trocar into the cyst and evacuates its contents. If the cyst contain pus or decomposed blood, he injects into the cavity a two and a half per cent. solution of carbolic acid. After emptying the cyst he depresses the handle of the trocar toward the skin; this uplifts the anterior abdominal wall, which he incises, having the trocar as a guide, down to the cyst-wall. He then ties the pedicle and removes the cyst. Dr. Noeggerath alleges that by this method the operation is simplified, and the violence of shock and the chance of infection is lessened.

There are two contra-indications to the employment of this method of operating; first, where the solid elements of the tumour are in excess of the liquid; and second, where the sac is small, in which case there is danger of cutting a loop of intestine which may be in front of the cyst; but this latter condition at least can be recognised and guarded against.

This operation has been performed upon twelve persons, three of whom died. In one of these cases, the operation was not finished, owing to the slipping of a ligature and consequent fatal hæmorrhage. Of the remaining eleven cases, all the patients below the age of seventy were saved.

Dr. Noeggerath then gives directions in regard to the treatment of the pedicle. He says that in the large majority of instances the intraperitoneal method is the best, but in some cases drainage is the only proper treatment. For these latter cases, he has adopted a new method of after-treatment, which consists in the use of the warm bath, the water being in contact with the peritoneal cavity. The bath is to be connected with hot and cold water, and with steam pipes, and arranged for the attachment of a hammock for the patient to lie in. As a substitute, a common movable bath-tub with a double bottom may be used, but it must retain the water at a certain temperature without frequent additions of hot water. A contra-indication to the use of the bath is in persons very much weakened. He employs the permanent bath as a substitute for ordinary drainage in ovariotomy, after Freund's operation, after the removal of fibroid tumours, and after Cæsarean section.

In the description which followed the reading of the paper, Dr. T. A. Emmet said, that the value of antisepsis in surgical operations could not be questioned; it was important to discover how far the present antiseptic method could be simplified. In general surgery, where the antiseptic method was not followed, success in operating depended on thorough and deep drainage; in ovariotomy, antisepsis must be observed if good results are to be obtained. The method that Dr. Noeggerath proposed, of so preparing a private dwelling as to insure the best hygienic conditions for the recovery of the patient, he thought practicable and feasible. The value of separate cottages and isolation he had tested, and found this method an indispensable aid to recovery. Out of thirty-three patients operated upon, thirty had recovered who had been treated in this manner; while, on the other hand, nine patients, who had been operated upon the year before this plan had been adopted, all died.

OSLER ON INFECTIOUS (SO-CALLED ULCERATIVE) ENDOCARDITIS.

DR. WILLIAM OSLER of Montreal discusses this disease in the *Arch. of Med.*, Feb. 1881, in connection with seven cases, one in a cow, of which he was cognisant, and all accompanied by necropsies. Under the terms diphtheritic, ulcerative, malignant, septic, or infectious endocarditis, arterial pyæmia, mycosis endocardii, physicians now recognise one of the most formidable of cardiac affections, characterised by a peculiar morbid process on the valves, blood-contaminations, constitutional symptoms of the typhoid or the pyæmic type, and usually associated with multiple emboli.

Clinically, three classes of cases are included in the disease known as ulcerative endocarditis, and a distinction should be made between them. The classes are—

1. Those cases in which the disease appears without any obvious cause, either spontaneously or in connection with rheumatism or some other affection. The term infectious might be applied to this class. It is the arterial pyæmia of Wilks, the primary ulcerative endocarditis of some authors.

2. Those in which the endocardial disease is secondary to some inflammatory process—acute necrosis, puerperal endometritis, etc. To these, the term septic might be applied.

3. In certain cases of chronic valvular disease an acute endocardial process may be engrafted (recurrent endocarditis), presenting anatomical features similar to the infectious form, but not characterised by the same clinical picture, the patients dying with the symptoms of chronic heart-disease.

The chief points to which Dr. Osler wishes to call attention, and which are illustrated by the cases are these: 1. The occurrence of the majority of cases of infectious endocarditis independently of rheumatism; 2. The frequency with which infectious endocarditis is associated with pneumonia; 3. The occurrence of meningitis in some of the cases; 4. The production of acute multiple aneurisms of the aorta in the disease; 5. Certain histological features in the endocardial vegetations, and particularly a remarkable fungoid growth met with in one of the cases.

1. Primary infectious endocarditis in the majority of cases does not occur in connection with acute rheumatism, as is almost universally stated to be the case. Of fifty-seven cases of this kind, in only fifteen is there any mention either of acute rheumatism or of previous rheumatic attacks, that is, in 26.3 per cent. Dr. Ogle, in the *Trans. of the Path. Soc. of London*, vol. ix, gives twenty-one cases of aneurism of the valves from ulcerative endocarditis; and of eighteen in which a history is given, fifteen had not had rheumatism. Kirkes, the pioneer in this department of pathology, noticed the fact of its independent occurrence. Dr. Osler has been surprised at this result, as he was previously of the opinion, expressed strongly by Rosenstein and others, that the great majority of the cases are met with in connection with acute rheumatism.

2. The second point is the frequent coincidence with pneumonia. In five cases in succession this combination was met with. Of twenty-one cases of

primary infectious endocarditis recorded in the *Trans. of the Path. Soc. of London*, hepatisation of the lung is mentioned in ten as a concomitant pathological condition. Of the fifty-seven cases analysed, twenty-two were complicated with or occurred in pneumonia, that is, 38.5 per cent. Is the inflammation of the lung a complication of the endocarditis, or *vice versâ?* In most of the cases it is distinctly stated that the lung was hepatised; and, in the majority of instances, the disease appears to have begun with the symptoms of ordinary pneumonia, so that the conclusion naturally suggests itself that the endocarditis was either secondary to the pneumonia or excited by the same cause; which latter he thinks the more probable supposition. Endocarditis is scarcely mentioned as a complication of inflammation of the lungs. In Huss's statistics (quoted by Wilson Fox in Reynolds's *System of Medicine*) there are only four cases mentioned out of 959. The condition of the inflamed part of the lung in Dr. Osler's cases did not present any coarse or microscopical differences from ordinary cases. There were no micrococci in the air-cells, nor any appearances resembling the remarkable bacteritic pneumonia described by Delafield (*Studies in Path. Anat.*, p. 65, pl. xxxv). It is not very evident wherein the connection lies between these affections, but the very considerable number of instances in which they occur together is against a simple accidental complication.

3. A third point of clinical interest is the occurrence of meningitis in three of these cases. In the fifty-seven cases which Dr. Osler analysed, this is mentioned as present in thirteen; that is, 22.8 per cent. In seven, it occurred with pneumonia. Meningeal hæmorrhage is mentioned several times. In a case of inflammation of the lungs, particularly if the apex be involved (in three out of four such instances he found the upper part of the lung affected), the development of an irregular temperature with cerebral symptoms should suggest the possibility of endocardial mischief, with secondary meningeal inflammation.

4. The presence of multiple aneurisms of the aorta in one case is deserving of comment. The man had evidently been the subject of that peculiar congenital malformation of the aortic semilunar valves which results in the fusion of two segments. In this condition, they are very liable to be the seat of a sclerotic endocarditis which terminates in incompetency. Dr. Osler has met with and described two other cases in which the united curtains, when in this state, were the seat of extensive ulcerative endocarditis.

5. With regard to the intimate pathology of this disease, it is assumed by most recent writers to be a mycosis, that is, to be dependent upon the growth and propagation of low fungi on the valves, with a consequent contamination of the blood. Certainly, the minute bodies found in the endocardial vegetations correspond in their chemical and microscopical relations to micrococci. Most writers have accepted the view that these bodies are fungoid in nature. Heller, however (Virchow's *Archiv*, Band lxii, 1875), criticises strongly the prevailing conceptions with regard to micrococci, and thinks that there are scarcely any microchemical agents or physical signs by which they can be distinguished from fatty detritus.

Apart from any microchemical tests, there are peculiarities about these masses which we do not see in any form of fatty degeneration, as the uniformity in size of the granules and their collection into large groups.

The question of the relation of the micrococci to the disease presents many difficulties. Klebs, and most German writers on the subject, give an unhesitating assent to the parisitic theory, and suppose the micrococci to gain access either through the gastro-intestinal or the respiratory system, and they believe them to constitute the actual *materies morbi*. According to Koster (Virchow's *Archiv*, Band lxxii) and Klebs (*Archiv für Exper. Pathol. und Pharm.*, Band ix) not only are these fungi present in the so-called ulcerative form, but they also exist in, and cause the development of, the ordinary warty or bead-like vegetations frequently met with on the valves. Within the past few months Dr. Osler has examined four specimens of this variety of endocardial vegetation, and has been able to determine in each instance the presence of micrococci; not, it is true, in the same luxuriance, or arranged in definite colonies, but still sufficiently distinctive. In one case of mitral stenosis, a fresh vegetation, when teased out, showed many closely packed spherules, some of which were, as Klebs has remarked with reference to the micrococci in this variety, larger than those met with in the ulcerative form. He was greatly struck with the resemblance which certain of these bodies, in this instance, bore to the individual re-elements of Schultze's granule-masses—those peculiar granular clumps common in the blood of some animals and of impoverished persons. These structures are usually regarded as the *débris* of colourless blood-corpuscles; but Dr. Osler indicates that they are aggregations of discoid bodies, probably living organisms, of the nature of which we are still ignorant. They do not exist in the form of masses in the blood, but as isolated particles which might readily become adherent to the fresh endocardial outgrowths. This is merely mentioned as a point worthy of future investigation.

It matters little how the micrococci get to the valves, whether by embolism of the small vessels, as Koster supposes, or by deposition on the surface, as Klebs thinks; the question is: Are they responsible by their growth for the peculiar course and malignancy of cases of infectious endocarditis, primary or secondary? The facts of their occurrence in the verrucose form, which may not be accompanied by any symptoms, and of their abundance in the recurrent endocarditis, which attacks old sclerotic valves, are, Dr. Osler thinks, opposed to this view; for if they act as a septic poison in the one case, why should they not do so in the other? The micrococci do not appear to infest the blood in any numbers, so that they must be supposed to distil some subtle poison, 'such soon-speeding gear as will disperse itself through all the veins', and profoundly disturb nutrition. The occurrence, however, of fatal septic cases, closely allied to, or identical with those in which a bacteritic endocarditis is found, but in which no micrococci can be detected, either in the local process or in the blood, teaches us that the same poison may exist without the intervention of bacteria, the presence of which, in any case, may be only a partial phenomenon in a general infective process.

LEWIN ON THE ACTION OF TANNIN ON THE ANIMAL BODY.

Among the oldest known, and most frequently employed medicines, are to be reckoned the astringents;

but pharmacological investigations have been very seldom directed towards them. In a recent paper (Virchow's *Archiv*, Band lxxxi, p. 74), Lewin furnishes a very exhaustive account of one of the most important of these, namely, tannin. The officinal preparation of this drug being by no means pure, its separation for the observations detailed in this paper was conducted by means of Löwe's method, which is based upon the property of concentrated solution of common salt to precipitate only tannic acid, and not gallic acid; the pure tannic acid being subsequently separated from the chloride of sodium by means of acetic ether. Gallic acid has the property of precipitating albumen and albuminous substances from their solutions. These precipitates, insoluble in water, dissolve in an excess of albumen or of gelatine solution, in dilute lactic acid, in carbonic acid, and in caustic alkalis. Tannin loses its property of coagulating albuminous bodies, when it is mixed with alkali, to the point of weak alkaline reaction. The alkaline tannate, so produced, has no longer an action upon albumen, but still possesses the characteristic astringent taste of unaltered tannin. The artificial digestion of albumen is not interfered with by the presence of tannin, which substance neither acts upon the peptone during its formation, or subsequently to that stage of digestion, nor does it precipitate pepsin. This behaviour is to be ascribed to the presence of free hydrochloric acid.

When a few drops of solution of tannin are added to blood, there forms, at the point of contact of the two fluids, a precipitate of tannin-albuminate, which disappears when the fluids are shaken up. If more of the tannin be added, a point is at length reached when the precipitate is no longer redissolved. This point corresponds to the disappearance of the alkaline, and the commencement of the acid reaction. Not only the albumen, but also the colouring matter of the blood, becomes altered on the addition of tannin; the blood showing, when examined with the spectroscope, the absorption-bands of acid hæmatin.

The anteputrefactive action of tannin was long questioned, since the substance itself in solution, after long keeping, decomposes. But it seems clear that such an action does exist. When a solution is added to putrid blood, the disagreeable odour disappears after a few minutes, and the mixture may be kept in an open vessel, exposed to the air for weeks, without undergoing farther decomposition. This action seems to depend upon the strong chemical affinity of tannin for albuminous substances, whereby the organisms of putrefaction are themselves seized upon, and their development hindered.

The outward application of tannin to the various tissues alters their physical characters. The connective tissue shrinks together and hardens. The muscles are so affected, that their primary and secondary stretching are absolutely less than that of normal muscle; while, when the weight is removed, they return more exactly to their original length. This action upon the muscles takes place in the frog, whether the tannin be injected into the peritoneal cavity, or into the lymph-sac. The cause of this distant astringent action, after the subcutaneous injection of tannin, depends upon two factors; firstly, upon the energetic hygroscopic character of tannin, the abstraction of the water from the tissues rendering their cohesion and elasticity greater; and secondly, and still more importantly, upon the power of tannin to take up oxygen. The alkaline tannate abstracts oxygen from the tissues, and thereby gives rise to the phenomena pertaining to deficient oxygenation, which, in the muscles of the frog, correspond exactly with the conditions to which the subcutaneous injection of tannin gives rise.

The absorption of tannin into the body takes place in the following manner. When the solution enters the stomach, it does not affect the peptones present, since they are in a solution of hydrochloric acid; but the fluid unaltered albuminous bodies are changed into a tannate of albumen, provided that there is no excess of dissolved albumen, or of lactic acid. The albuminate of tannin, if it be formed, becomes digested, and the tannin passes into the vessels. As it enters in small quantities, it dissolves in the alkaline blood or lymph, and circulates as a soluble alkaline tannate.

The following are some of the practical suggestions in regard to the administration of tannin, which may be derived from the observations contained in this very able paper. It is to be borne in mind that, when tannin enters the stomach, it forms with albumen precipitates, which, although soluble, require for their solution the presence of certain definite conditions (for example, excess of albumen, of lactic, or of hydrochloric acid). If the albuminate of tannin be not soon dissolved, or if the tannin be given in the form of a powder, the solid particles adhere to the gastric walls, and produce extensive irritation of the mucous membrane. This occasions the most uncomfortable sensations, feeling of weight and heat in the epigastrium, loss of appetite, etc. In order to avoid this, the tannin should be given, either as a solution of albuminate of tannin, or as alkaline tannate. In any case, it should not be administered in the form of a powder. A solution of albuminate of tannin can be readily prepared in any concentration, if a solution of albumen be added to tannin dissolved in a little water, and the resulting precipitate re-dissolved by excess of albumen. Absorption is still more readily accomplished when the drug is given in the form of an alkaline solution, by the addition of sufficient carbonate of soda to render the re-action alkaline. Or, finally, a third rational method of administration consists in precipitating the solution of tannin by means of albumen, and adding sufficient carbonate of soda to dissolve the precipitate.

J. GRAHAM BROWN, M.D.

PÉTER ON THE EXAMINATION OF THE LOCAL SENSIBILITY OF THE PRECORDIAL AND PRE-AORTIC REGIONS IN DISEASES OF THE HEART.

THE examination of the local sensibility of the precordial and pre-aortic regions will, Dr. Péter believes (*Revue Méd.*, Jan. 8th, 1881), become, in course of time, as necessary and usual as auscultation and percussion. It has for its object the investigation of the state of sensibility of the heart—that is, of its muscles and ganglia; the cardiac plexus; the pneumogastric nerves; and the phrenic nerves.

The process is very simple. It consists in pressing with the tip of the index finger, and with moderate force (just as one searches for painful spots in cases of neuralgia), upon the intercostal spaces in the whole of the precordial and pre-aortic region; also upon the sternum, and generally on those points of the thorax and neck in relation with these

organs, the sensibility of which we desire to explore. In health, the cardiac muscle is insensible. Is it so in disease? Dr. Péter has satisfied himself that it is not; that in diseases it suffers, and pressure upon it is painful. In acute and chronic myocarditis, patients complain spontaneously of painful sensations in the heart, which are too frequently disregarded, or misinterpreted and referred to intercostal neuralgia. But these pains are described as deep-seated, and they are aggravated by emotions or fatigue.

But, besides this spontaneous complaint of pain, pain may be excited in such cases by pressure. If we press with the tip of the finger, and with sufficient force, in succession, on the third, fourth, fifth, and even sixth left intercostal spaces, at first close to the sternum, and then more and more to the left of that bone as we descend—we shall not fail, in every case of myocarditis, to provoke tolerably acute pains. The greatest amount of pain is felt in the fourth and fifth spaces (sometimes, in cases of hypertrophy, in the sixth) corresponding with the situation of the ventricles, which are more commonly the seat of inflammation than the auricles. In some cases, pressure over the apex of the heart, which is very commonly the seat of degenerative changes, is alone painful. The pain produced by this pressure is sufficiently acute for the patient to start back or even to cry out.

These painful points differ from those of intercostal neuralgia, inasmuch as they are wholly *anterior*, whereas in neuralgia there are also two other painful spots—one lateral and the other posterior. In inveterate smokers beyond middle age, Dr. Péter has frequently found a tender spot, on pressure, in the third left intercostal space, near the sternum—a spot which, he thinks, corresponds with the auriculo-ventricular groove, and to the situation of the ganglion of Remak, which he concludes to be in a morbid state from impregnation with tobacco. Such persons complain of cardiac intermission, and of deep-seated pain which they refer to the spot indicated.

In disease of the aorta and its valves, there is often pain on pressure in the second left intercostal space, quite close to the sternum; this is not caused by the aortic lesion itself, but by a 'propagated neuritis'. In exploring the sensibility of the nerves of the cardiac plexus, we must press gently, but with sufficient force, first in the third left intercostal space, then in the second, and then in the first; and from the second left space we pass to the adjacent portion of the sternum. If there be neuritis, there is pain on pressure, and the same is the case if there exist neuralgia of the plexus; and this should always make us suspect the existence of disease of the coats of the aorta.

By pursuing the same method, the sensibility of the pneumogastric may be explored. Having discovered the presence of a painful spot in the second left intercostal space, we may next find tenderness over the cervical portion of the nerve by compressing it just in front of the sterno-mastoid muscle; and then usually pain is felt either on the left side exclusively, or on both sides, but in that case it is always more intense on the left; and we may even find evidence of a degree of suffering by pressing over the apparent origin of the nerve in the nape of the neck, *i.e.*, over the second, third, and fourth cervical spines. It is necessary also to examine the sensibility of the phrenic nerves: this is done by pressing with the finger, successively, first, over the diaphragmatic attachment; second, over their course within the thorax along the borders of the sternum on both sides; and, third, in the neck over the attachment of the scalenus anticus to the first rib. We may thus find that both phrenics are painful, and that the left is more so than the right, and sometimes that the left is alone painful, or remains so after the right has ceased to be painful.

Dr. Péter considers this method of exploring the sensibility of the precordial and pre-aortic regions as of the highest importance, in the diagnosis of diseased states of the cardiac muscle and of the cardiac nerves. An important precaution in the case of any painful affection, as angina pectoris, is not to press too strongly with the tip of the finger. Dr. Péter has seen an attack of angina brought on by neglect of this precaution.

I. Burney Yeo, M.D.

CHARCOT ON THE EMPLOYMENT OF STATIC ELECTRICITY.

M. Charcot, in a lecture (*Le Progrès Méd.*, Nos. 17 and 18, 1881) having recapitulated some of the main characteristics of hysteria, with the object of showing that it is neither a hopelessly complex question, nor a feigned disease, nor the result of expectant attention, but a morbid condition, presenting a number of interesting and definite objective peculiarities, proceeded to his main subject, the use of static electricity in the treatment of this disorder. At the outset, it is worth while to define what is meant by static electricity, and to point out wherein it differs from faradism and galvanism. Electricity is one, however produced; but it possesses two attributes—1, quantity; and, 2, tension; which, by their variations, lead to its division into three groups. The ordinary electrical machine produces electricity in small quantity, but of high tension; this is static electricity; the galvanic pile produces electricity in great quantity, but of low tension; and, finally, the faradic, or induced current, stands midway between these two, in respect to both quantity and tension. These various forms of electricity differ in their physical and physiological effects; thus, the gold leaves of an electroscope diverge on the approach of the static current, but remain unaffected by the galvanic pile; the faradic current ceases to act on a muscle a certain time after the section of the nerve; while the galvanic current acts more energetically than when the parts are in the normal state. Similar differences also exist in the therapeutic action of these currents. Static electricity has been very little used in medicine; an exception is in the case of Mauduyt, in 1875. Duchenne, Remak, Benedikt, and Onimus, attached little importance to it. Its establishment as a therapeutic means is greatly due to M. R. Vigouroux. The machine he uses is one of Carré's, worked by a gas-motor engine, and so arranged that five or six patients can be electrified at once. The machine is kept under a bell-jar, with some chloride of calcium, so as to be always dry and ready for use. The patients are placed on insulated stools, connected with one pole of the battery, while the other pole is conducted into the earth. The patient is thus in a bath of static electricity. The electricity is by no means at rest, but escapes at every projecting part of the body, giving rise to special sensations of general tingling, cobwebs on the face, blowing on the extremities, etc.; the cutaneous perspiration is augmented, digestion and appetite are improved. By the aid of excitors, these discharges may be

localised in desired parts of the body. These excitors are pieces of metal, with insulated handles, communicating by a chain with the earth. When brought to a distance of 15 to 20 centimètres (6 or 8 inches) from the patient, they give rise to the sensation of a current of warm or cold air, which is called the 'electrical wind'. At 6 to 8 centimètres (2½ or 3 inches), the sensation resembles numerous prickings, and a pencil of fine luminous lines passes from the point of the excitor, becoming broader as it nears the skin; this is called the 'aigrette'. Finally, when still nearer, a spark is produced, accompanied by a sensation of puncture and contraction of the subjacent muscle; by this means muscles may be made to contract which resist the faradic current. All these various forms may be applied therapeutically. A patient was shown suffering from hysterical contraction of the left hand, wrist, and forearm; she was cured two years ago by the magnet, but recently the contraction had returned. Static electricity readily produced contraction of the opposite hand, but complete transfer was not effected, the muscles of the left arm becoming only somewhat relaxed. Hope was expressed that perseverance with the remedy would effect a cure. The other patients shown were cases of hysterical anæsthesia, complete or unilateral. In complete anæsthesia, static electricity produces at first diminution of anæsthesia on the side in which it is less marked (for it is always less marked on one side than on the other), then transfer of the anæsthesia to the comparatively sound side, then its entire disappearance; in hemianæsthesia, the proceeding is the same, with the exception of the first phase. Sensibility, regained in this manner, remains many hours, or even days, and by repeating the sittings it may be kept up. Something else is gained, too, by curing hysterical patients of their anæsthesia; for, while they are no longer anæsthetic, they are also, for the time being, incapable of being hypnotised; and often pressure on the hysterogenic zones does not determine the attacks. Besides these results with hysterical patients, certain cases of peripheral facial paralysis have been successfully treated. In a case of paralysis agitans, the tremor was arrested in the parts of the body upon which the electric wind or spark was directed; and in many cases, the disease has been happily influenced. Certain cases of nervous disorder, spinal irritation, dyspepsia, dysmenorrhœa, which resisted various treatment, were ameliorated by this means. In conclusion, M. Charcot says, that on the whole, as we see, static electricity is a therapeutic agent of primary importance, concerning which there remains, without doubt, much to be said and to be investigated, but which deserves to be drawn from the oblivion to which, for a long time, it seems to have been systematically relegated.

ROBERT SAUNDBY, M.D.

UFFELMANN ON THE FATTY CONSTITUENTS OF THE FÆCES OF HEALTHY CHILDREN.

A PAPER by Professor Uffelmann (*Archiv für Kinderheilkunde*, vol ii, parts 1 and 2) is a valuable contribution to the great question of the nutrition of infants. Premising that, although milk is generally better absorbed by sucklings than by adults, a very appreciable portion of the fat of this article of food is met with in the fæces of infants even in perfect health, he proceeds thus to quote the results given by different writers. Simon (1842) found the fæces of a suckling to contain not less than 52 per cent. of fat, besides 16 per cent. mixed with bile-pigments. This was, however, in a child six days old, before the process of digestion had been fully established; and he gives no account how he obtained this result. Wegscheider (1875) states that of dried fæces there is 10 per cent. of fat and fatty acids, without reckoning 1.5 per cent. of acids combined with lime and magnesia. The fluctuations in amount were considerable, varying from a minimum of 0.54 per cent. or 4 per cent. of dried fæces, to 2.33 per cent., or 16 per cent. of the dried. The infants he observed were exceptionally healthy, and from 2 to 6 months old, presumably sucklings; but since there was no guarantee that they were not otherwise fed, the above-mentioned differences may be explained. Forster (1879), examining the fæces of a 4 months old healthy child fed on cow's milk and rice water in the proportion of 4 to 1, found a much higher figure, viz., 30 to 40 per cent. Biedert (1879) gives a mean of 9.73 per cent., with fluctuations ranging from 3.8 to 20.3 per cent.

The method of analysis pursued by the author is to take a weighed quantity of fæces within two hours of being passed, dry it, and reduce it to a very fine powder, when the true weight can be ascertained. To effect complete pulverisation, it is advisable to add some clean fine sand. The powdered mass is then extracted with ether, and the remainder treated with chloric ether. The ethereal extract is then completely evaporated, and the comparison of the weight of the dried extract with that of the original dried fæces gives the required percentage. By this method is obtained, not only the fat and free fatty acids, but also as much of the latter as are contained in soaps. The percentage by this plan is consequently higher than by that of simple extraction by ether, and may be most accurately determined if the reduction to powder be complete, and the extraction with ether sufficiently often repeated. In order to more completely estimate the amount of those fatty acids combined with lime and magnesia, the author successively treats the dried fæces with alcohol, ether, and, finally, with chloric ether. By the last-named reagent, the fatty acids combined in the earthy soaps are dissolved out, whilst those united with the fixed alkalis or with ammonia are removed in the alcohol. Microscopic examination of the residue of the ethereal solution is most uniform, and gives a trustworthy and rapid insight into its nature.

The author's observations were made upon infants under one year old, five being fed exclusively at the breast, two on cow's milk, and one on Nestle's food. The results he obtained from the examination of the five sucklings (detailed analyses of which are given) led him to consider that the average percentage of fat and fatty acids in the dried fæces of perfectly healthily conditioned sucklings is 20. The minimum amount he does not feel prepared to state, but considers it may probably be reckoned as a tenth part of the dried mass; and he further explains the lower figure given by other authors, as being a proof that the food of the child is deficient in fat, or that the amount of fatty acids combined in the soaps is not estimated. His results also show that considerable variation in the amount of fatty constituents occurs among different healthy children, though remaining tolerably constant in the individual, so long as there is no disturbance of digestion. It is further very apparent that, so long as the portions of fat in the food and the power of digestion remain the same,

there can be no great variation in the quantity of fat in the excreta ; thus the difference between the fæcal fat of different sucklings must be explained by the variation in the amount of fat contained in the milk of the nurses, and by differences in the individual power of assimilation. The writer quotes a case which strikingly illustrates the effect of illness. A child, aged 8 months, which, under previous observation, gave an average of 14.8 per cent. of fat in the dried stools, was attacked with acute bronchitis, accompanied by considerable fever. On the fourth day of the disease, the amount of fat reached 40.7 per cent., gradually declining to 25 per cent. on the ninth day, when defervescence began, and finally falling to 15.2 per cent. on the thirteenth day. Dr. Uffelmann has also demonstrated that the process of dentition, even when unaccompanied by any disturbance of digestion, leads to diminished absorption of fat, with an increased quantity in the fæces. Summing up his results from all sources, the author concludes that the quantity of fat in the excreta of children under one year old depends upon three conditions; viz., the amount of fat in the food, the digestibility of the same, and the individual power of assimilation. The first two conditions, doubtless, determine the smaller quantity of fæcal fat of sucklings whose food, as compared to cow's milk, is deficient in fat, but superior in digestibility. The influence of the third condition, though undoubted, is not easily defined, and possibly other circumstances, such as the size of the fat-globules, or the chemical condition in which the fat exists in the food, may affect the result. With Nestle's food, the quantity of fat and the acidity of the excrement were increased. In conclusion, the author insists that, in satisfactorily determining the normal quantity of fæcal fat, not only the percentage amount is to be ascertained, but also the proportion between the quantity excreted and that ingested; and only when this is done will the result have any bearing upon the hygiene of children. The writer considers it to be an inquiry of the greatest importance to ascertain accurately the quantity of earthy soaps contained in the fæces, as well as the circumstances by which it is affected; for there are children in whose stools a very considerable amount of fatty acids in combination with lime is to be found; and many of the so-called casein-lumps are demonstrated, both chemically and microscopically, to consist of this material. W. H. Allchin, M.B.

MEDIN ON EPIDEMIC CEREBRO-SPINAL MENINGITIS IN INFANTS.*

In his description of the modifications of the cerebral spaces and of the spinal cord, the author follows the nomenclature proposed by Key and Retzius for the membranes of the brain and the serous spaces. The most important changes met with are the following. The bones of the vault of the cranium are hyperæmic, as well as the dura mater : in one case, a thrombus was found in the transverse sinuses. The interior of the skull sometimes presents a layer of thin fibrous pus, scanty in quality, lying principally along the longitudinal sinus and in the median fossæ ; exudation in the subdural space is never met with. The presence of exudation at the parts of the dura mater above mentioned, is probably due to the circumstance that it is at those points that the arachnoid fringes are most numerous. There is no deposit of exudation on the surface of the arachnoid, but in the subarachnoid tissue; and it is consequently between the pia mater and arachnoid that the pathological processes are developed.

The subarachnoid vessels are hyperæmic, except when the quantity of exudation is considerable, or when the ventricles are distended. The convolutions are rather frequently flattened. When the diseased process is little advanced, the exudation in the subarachnoid spaces consists of a turbid gelatinous fluid, which afterwards becomes sero-purulent. Sometimes scattered patches of exudation are found in the membranes : frequently there is a thick yellow purulent and fibrinous deposit only along the vessels in the depressions of the brain, or it may extend over the whole brain, so as to surround it with a thick layer of exudation. At the base of the brain, exudations are always found in greater or less quantity ; they are generally yellow and fusiform. In some rare cases, where the disease has lasted several weeks, a white or yellowish false membrane has been found. In a certain number of cases, the exudation appears to have emitted the odour of sulphuretted hydrogen.

Exudation is never met with between the pia mater (*i.e.*, the dense internal layer of the delicate membrane) and the brain itself. On the other hand, the nerve-roots emerging from the bony sheath are sometimes covered.

The contents of the cerebral ventricles are frequently turbid and increased, rarely purulent ; the ependyma generally presents nothing remarkable, even when the contents are purulent. In some very rare cases, considerable alterations have been found, such as a thick false membrane, or, a little more frequently, softening. Exudation has been met with in the velum interpositum, that is to say, in the subarachnoid spaces, between its two layers. In a small number of cases, sanguineous effusions have been found in the ventricles. The substance of the brain is usually anæmic, and sometimes also œdematous ; hyperæmia was met with in a comparatively small number of cases. Foci of necrotic softening are sometimes observed, smaller in the grey matter, larger in the white substance, in the neighbourhood of the ventricles. The exudation frequently presents the a very peculiar distribution in the membrane of spinal cord ; there is none in the anterior part, except in the lumbar region ; but, on the other hand, it is abundant in the posterior part, most often in the lower cervical, dorsal, and lumbar regions.

Pericarditis was met with in one case. The blood is frequently dark-coloured, thin or thick. The lungs are often affected with capillary bronchitis, bronchopneumonia, and pleurisy. The peritoneum surrounding the spleen is frequently attacked (splenoperitonitis); rather often there is general peritonitis, usually very mild in character. The liver is rarely mentioned in the accounts of necropsies. The umbilical vessels are very rarely found to be diseased in any way. Changes are met with in the mucous membrane of the alimentary canal, but they offer no special interest. In recent years attention has been paid to the kidneys, and parenchymatous nephritis has been observed on several occasions. Suppurative arthritis was met with in five cases.

Dr. Medin insists on the importance of regarding, in accordance with the views of Key and Retzius, the perineural lymphatic system as a whole, viz., the cerebral ventricles, the subarachnoid spaces, and the finest meshes of the subarachnoid tissue, as well as the nerve-sheaths and the circumvascular sheaths accompanying the vessels of the brain and spinal

* Concluded from page 142.

cord. All these spaces communicate with each other, and all are conductors of the cerebro-spinal fluid. The pathological changes observed in cerebro-spinal meningitis furnish a proof of the correctness of considering the distinct parts of the perineural system as portion of a connected whole.

It must be remembered that the arachnoid, or the densified outer layer of the fine membranes, is destitute of vessels, that consequently it cannot deposit an exudation on its surface, and that at the same time it hinders exudations from passing from the subarachnoid spaces to the subdural spaces; the pia mater on its side presents the same obstacle. The insignificant quantity of exudation which is found along the longitudinal sinus and in the median fossæ, depends on the considerable number of arachnoid fringes which exist there. The exudation is deposited in the delicate membranes, principally and by preference along the vessels of the anfractuosities, because there is there a greater abundance of subarachnoid tissue with spacious meshes.

Why is the exudation deposited on the posterior and not on the anterior surface of the spinal cord? The reason is, that there is very little subarachnoid tissue on the anterior part, while it is abundant posteriorly, from the cervical to the lumbar region.

The turbidity of the contents of the ventricles generally depends on the drainage from the subarachnoid spaces.

The anæmia of the cerebral substance is explained by the afflux of exudation into the circumvascular sheaths, giving rise to compression of the blood-vessels.

Under the head of determination of the disease and differential diagnosis, Dr. Medin expresses the following opinion.

The cerebro-spinal meningitis of infants is an infective disease, resembling in its essential characters the cerebro-spinal meningitis of adults, and distinguished from it only by the circumstance that it almost exclusively attacks infants of the most tender age. It is characterised, both symptomatically and anatomically, by inflammation, with purulent exudation in the perineural lymphatic system, as well as by changes in several other organs of the body, indicating the constitutional nature of the malady. In circumstances favourable to its development, such as certain seasons and overcrowding of children, it has a strong tendency to become epidemic. Epidemics of meningitis are frequently followed by numerous cases of acute pulmonary disease, which have probably an intimate causal connection with the epidemic meningitis.

The diagnosis is difficult: 1. When there are no characteristic symptoms, or no symptom has been observed; 2. When symptoms are present, but one is tempted to attribute them to some other disease; 3. In newly born children, where a septicæmic state may be suspected. The diseases with which it may be confounded are: tubercular meningitis, thrombosis of the cerebral sinuses, neuroses of motor power, intermittent fever, and infantile cholera.

The prognosis is unfavourable, and almost infallibly fatal in advanced cases. Sequelæ of the disease were observed in a child three years after recovery. It was deaf and dumb, and had slight paresis of the tongue and left leg.

The treatment presents nothing of interest except as regards prophylaxis. As a result of enlargement of the wards and of improved ventilation, there has been a sensible diminution in the frequency of the disease in the institution at Stockholm in recent years. A chart is given, showing that the number of deaths in the wards increased in proportion as the amount of cubic space allotted to each individual was diminished, and *vice versâ*. The author remarks, in conclusion, that very young infants require abundance of space and of fresh air.

A. HENRY, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. HENNING, JOHN A.—On the Therapeutic Action of Senecio Aureus. (*Therap. Gaz.*, March 1881.)

2. WOODWARD, A. B.—On Equisetum Hyemale. (*Therap. Gaz.*, March 1881.)

3. MORSE, WILLARD H.—Damiana as an Aphrodisiac. (*Therap. Gaz.*, March 1881.)

4. BUTTERFIELD, S. A.—On the Purgative Properties of Nitro-Glycerine. (*Therap. Gaz.*, March 1881.)

5. SIMONTON, A. C.—On Alum in Certain Forms of Hyperidrosis. (*Therap. Gaz.*, March 1881.)

6. KORMANN, E.—On Bromide of Ammonium in Whooping-Cough. (*Jahrb. für Kinderheil.*, Heft 1 and 2, 1880.)

7. SCHWARZ, FRIEDRICH.—On Iodine as a Specific in Croupous Pneumonia. (*Deutch Med. Woch.*, Band vii, No. 2, 1881.)

8. SCHLESINGER.—On the Action of Small Doses of Mercury upon the Lower Animals. (*Archiv für Exper. Pathol. und Pharm.*, Band xiii.)

9. LICHTHEIM.—On the Antipyretic Action of the Phenols. (*Breslau. Aerztl. Zeitschr.*, 1881, No. 1.)

10. BUDDE.—Fuchsin in Chronic Albuminuria. (*Ugeskrift for Läger*, series 4, Band ii.)

11. ELLEFSEN, C. J.—A Case of Intestinal Obstruction Successfully Treated by Large Doses of Belladonna. (*Norsk Mag. for Lägevidensk.*, series 3, Band x.)

12. DUMAS.—On the Action of Aconitine in Neuralgia. (*Bull. Gén. de Thérap.*, p. 287.)

13. DESNOS.—The Treatment of Exophthalmic Goître by Subcutaneous Injection of Duboisin. (*Bull. de Thérap.*, Jan. 30, 1881.)

14. BOURNEVILLE and D'OLLIER.—Bromide of Ethyl in Epilepsy and Hysteria. (*Le Prog. Méd.*, No. 13, 1881.)

15. MENIÈRE.—On Purulent Discharge from the Ear. (*Jour. de Thérap.*)

16. FÉRÉOL.—On the Treatment of Neuralgia by Ammoniacal Sulphate of Copper. (*Jour. de Thérap.*, March 1881.)

17. MICHEL.—On Indian Hemp in Uterine Affections. (*Montpellier Méd.*)

18. GOSSELIN and BERGERON.—On the Antiseptic Properties of the Alcoholic Solution of Gualtheria. (*Archives Générales de Méd.*, Jan. 1881.)

19. BLONDEAU.—On the use of Eonymin in the Treatment of Pseudo-membranous Colitis. (*France Méd.*)

20. VILLARD.—On Cannabis Indica in Delirium Tremens. (*Le Progrès Méd.*, No. 8, 1881.)

21. TAURET, C.—On Saccharocarbonate of Iron. (*Bull. Gén. de Thérap.*, vol. i, p. 127, 1881.)

22. VIDAL.—The Treatment of Keloid by Scarification. (*Ibid.*, p. 127.)

23. BOCHEFONTAINE.—On a New Sedative (Erythrina). (*Comptes Rendus*, tome xcii.)

24. HOWARD, H. C.—On the Special Use of Iodoform. (*Buffalo Physician's and Surgeon's Investigator.*)

25. ARNOLD.—On the Therapeutic Value of Tartar Emetic. (*New York Med. Rec.*, April 1881.)

26. BARTON, J. M.—On Glycerine in Trichinosis. (*Amer. Col. and Clin. Rec.*)

27. CURTIS.—On Walnut Leaves in Diphtheria. (*Boston Med. Jour.*, March 10, 1881.)

28. Andeer.—On the use of Resorcin in Affections of the Stomach. (*Zeitsch. für Klin. Med.*, series 297.)

29. March, H. C.—On some New Uses of some Old Remedies. (*Med. Times*, Feb. 1881, pp. 239, 319.)

30. Thorburn, J.—On Resuscitation from Chloroform Syncope by Inverting the Body. (*Brit. Med. Jour.*, April 1881, p. 559.)

31. Kemp, George.—On the Use and Abuse of Salicylic Acid. (*Brit. Med. Jour.*, April 1881, p. 510.)

32. Spiers, W. R.—On a Ready Method of Applying strong Nitric Acid as a Caustic. (*Practitioner*, April 1881, p. 266.)

33. Shelly.—On the Value of Carbolic and Iodine in Typhoid Fever. (*Brit. Med. Jour.*, April 1881, p. 554.)

34. Woakes, E.—On Fluoric Acid in the Treatment of Bronchocele. (*Lancet*, March 1881, pp. 448, 497, 537.)

35. Clarke, T. F.—The Treatment of Gonorrhœa. (*Ibid.*, p. 499.)

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1. *Henning on the Therapeutic Action of Senecio Aureus.*—This is a small plant, rarely attaining a height of more than two feet, and having beautiful golden yellow flowers. An allied species, senecio gracilis, closely resembles it, but is larger and higher. These plants are popularly known by the names of 'life-root', 'false valerian', 'squaw weed', 'female regulator', and 'ragwort'. The active principle is found chiefly in the root, and may be extracted by water or alcohol. When given internally, it acts, according to Dr. Henning (*Therap. Gaz.*, March 1881), as a slight diuretic and diaphoretic, but its selective affinity is for the reproductive organs. It is useful in chlorosis, amenorrhœa, dysmenorrhœa, menorrhagia, and leucorrhœa, especially when these conditions are dependent on uterine inertia. In many cases, it is necessary to give the senecio for a considerable time—often for a month or six weeks. It is essentially a 'female regulator'. The fluid extract is the best preparation, and it should be given in doses of from ten to fifteen minims, gradually increased to half a drachm. It is incompatible with acids. Its resinoid has been extracted, and is known as senecin. It is given in doses of from 1 to 2 grains, in pills. [The paper is not so full as could have been desired, but the information is interesting, and the drug is undoubtedly worthy of attention. Most writers prefer the senecio gracilis.—*Rep.*]

2. *Woodward on Equisetum Hyemale.*—This, the common rush, says Dr. Woodward (*Therap. Gaz.*, March 1881), has long been used for scouring wooden milk-pails, and grows on swamps, and on the banks of streams all over the country. The author has employed it with much success in the treatment of inflammatory conditions of the kidneys, in diabetes mellitus, and in the nocturnal incontinence of urine of children. He considers that the indications for its use are a full bounding pulse, a fissured tongue, pains in the loins, and scanty high-coloured urine. He uses a saturated solution in alcohol, giving from three to five drops every three hours. [The author is, of course, wrong in supposing that the equisetum hyemale is the common rush. It belongs to the Equisetaceæ, and not to the Juncaceæ. It is known as the rough horsetail, and is used for polishing furniture, ivory, and brass, as well as for scouring milk-pails. It is imported from Holland under the name of Dutch rushes. Four or five years ago, it was introduced as a remedy for the nocturnal incontinence of urine in children. It has also been recommended in dropsy, suppression of urine, gravel, hæmaturia, gonorrhœa, and gleet. It is said to be useful in women who suffer from extreme and frequent urging to urinate, with severe pain immediately after passing urine. The subject is well worth investigating.—*Rep.*]

3. *Morse on Damiana as an Aphrodisiac.*—Dr. Morse (*Therap. Gaz.*, March 1881) finds that damiana possesses powerful aphrodisiac properties, but thinks there are older and better remedies of this class known to the profession. He hopes that in time it will be more fully appreciated. It exerts a powerful influence on the genital organs, especially in the male. It relieves sexual debility, rouses up anything like lethargy, and controls impotence. In sexual atony, both in boys and in old men, it is most useful. [Other remedies of the same class are phosphorus, cannabis Indica, nux vomica, cantharides, and possibly camphor in small doses. In ancient times, physicians used spirit of cock's blood, *testes galli*, the blood, brain, and penis of a cock or bull killed during coitus, shavings from a bull's horn taken under the same circumstances, troches of vipers or of pullets fed with vipers, and also ambergris and civet. Milk, Spanish wines, chocolate, dates, eggs, and oysters were directed to be included amongst the diet. Byron, in *Don Juan*, says, 'Eggs, oysters, too, are amatory food'. Culpeper recommends artichokes, and says, 'They are under the dominion of Venus, and, therefore, it is no marvel if they provoke lust, as indeed they do, being somewhat windy meat; and yet they stay the involuntary course of natural seed in man, which is commonly called nocturnal pollutions'.—*Rep.*]

4. *Butterfield on the Purgative Action of Nitroglycerine.*—Dr. Butterfield (*Therap. Gaz.*, March 1881) was induced to try nitroglycerine as a remedy for headache. He cut one of Parke, Davis, and Co.'s $\frac{1}{60}$ grain pills in two, and took one half at noon and the remainder the following morning. The headache was not relieved, but each dose acted as a prompt and powerful purgative, causing intense griping, which became so severe that he had to take a dose of morphia. Being surprised at the result, he repeated the experiment a week later, and with the same result. He expresses his astonishment at the wonderful activity of the drug, and is at a loss to understand how its cathartic action could have been so long overlooked. [The pills in question are perfectly reliable, and the reporter has used them in several cases of angina pectoris with marked benefit. It is somewhat late in the day to be informed that nitro-glycerine possesses active properties. The powerful purgative action of the drug has not been before observed, because it exists solely in the author's imagination.—*Rep.*]

5. *Simonton on Alum in Certain Forms of Hyperidrosis.*—For excessive and offensive sweating of the feet, Dr. Simonton (*Therap. Gaz.*, March 1881) considers that the best and simplest mode of procedure is the following. Let any one suffering from this trouble procure an ounce or two of finely pulverised alum, either the ordinary alum, or the exsiccated. It must be so finely pulverised, that there are no particles that will hurt the foot in walking when applied in the following manner. The patient having removed his socks any time during the day when the feet are bathed in perspiration, should sprinkle freely between the toes, and over the bottom of the foot, wherever it is moist, a portion of the powder; also in the toe of the socks, and over the bottom, including the heel. He should then put on his socks and boots, and go about his business. In two or three days, the socks should be changed for clean ones, and the application of the powder repeated. A few repetitions of this

process will stop the sweating for the present, but after a few weeks it will probably begin again. When this is the case, the former treatment should be repeated. By the repetition of the astringent application, the bottoms of the feet become hardened, and the tendency to sweat falls to the minimum.

6. *Kormann on Bromide of Ammonium in Whooping-cough.*—As the result of five recently observed cases, Kormann (*Jahr. für Kinder.*, Heft 1 and 2, 1880) asserts unhesitatingly that bromide of ammonium is more useful in whooping-cough than quinine. The bromide acts with greater certainty, and after a few doses (for young children, 5 centigrammes (¾ grain), for older children, from 25 centigrammes (4 grains) to 40 centigrammes (6 grains) every two hours) a marked improvement is observable. Should it be rejected by coughing, it must be repeated. There is only one contra-indication to its use; and that is, when there is in addition chronic bronchial catarrh. The author was much struck by the wonderful efficacy of the bromide in whooping-cough, and is at a loss to understand the prejudice against it. In only a few cases was there marked drowsiness, and this was quickly overcome by suspending the remedy for a few hours. When the medicine is not retained, it should be abandoned, and tannic acid or quinine substituted, or an attempt might be made to give it in a syrup, or with liquorice.

7. *Schwarz on Iodine as a Specific in Croupous Pneumonia.*—Iodine or iodide of potassium is, according to Schwarz (*Deutsche Med. Woch.*, Band vii, No. 2, 1881), a specific in simple uncomplicated croupous pneumonia. If given during the first twenty-four to thirty-six hours from the onset of the initial rigor, it will arrest the further progress of the disease. In illustration of this view, ten cases are recorded in which the crisis occurred before the end of the second stage, and in one case at the end of the first day. The following are the formulæ adopted by Schwarz: Tincture of iodine, five drops; water, 120 grammes (4 ounces); one tablespoonful hourly: Iodide of potassium, 1½ grammes (22 grains); simple syrup, 30 grammes (1 ounce); water, 120 grammes (4 ounces); one tablespoonful hourly.

W. MURRELL, M.D.

8. *Schlesinger on the Action of Small Doses of Mercury upon the Lower Animals.*—It was pointed out by Liégeois, upwards of ten years ago, that small doses of corrosive sublimate, administered during considerable periods of time to healthy persons, caused an increase in their body-weight. Keyes has published some more recent investigations on the subject. He found that 'small doses of mercury, continued for a short or a long period in syphilis, either alone or combined with iodide of potassium, increase the proportion of red corpuscles in the blood, and maintain them at a high standard. Further, mercury in small doses acts as a tonic upon healthy animals, increasing their weight. Lastly, it is a tonic in small doses to individuals in fair health who are not syphilitic. In such individuals, it augments the number of the red corpuscles'. Setting out from these data, Schlesinger (*Archiv. für Exp. Pathol. und Pharm.*, Band xiii, Heft 5) administered small doses of mercuric chloride to herbivorous and carnivorous animals for long periods of time, and arrived at the following conclusions. No ill effects were ever observed to follow the treatment, in either rabbits or dogs. It may be regarded as certain that the animals so treated gain in weight, and that their blood contains an increased proportion of red corpuscles. *Post mortem* examinations showed no deviation from the standard of health; nothing, indeed, beyond an unusual accumulation of fat in those regions where fat is normally present. No increase in the amount of urea excreted was ever noticed; albumen and sugar were never met with in the urine. While thus confirming Keyes' facts, the author dissents from his interpretation of them. He does not think that we are justified in ascribing tonic properties to mercury administered after this fashion. The increased number of red corpuscles, together with the accumulation of fat, point rather, in his opinion, to some influence of an inhibitory kind slowly and continuously exerted by the metal upon the processes of oxidation going on in the body.

E. BUCHANAN BAXTER.

9. *Lichtheim on the Antipyretic Action of the Phenols.*—Professor Lichtheim (*Breslauer Aerztl. Zeitschr.*, 1881, No. 1) regards the alarming symptoms observed by Jänicke during the use of resorcin as the result, not of the direct action of the drug, but of the rapid rise of temperature following the cessation of its action. Professor Lichtheim has made experiments also with the two other members of the dihydroxylbenzol group, hydroquinone and pyrocatechin, and also with phenol (carbolic acid), in relation to their antipyretic action when given internally. From these experiments, it appears that there is a distinct and concomitant parallelism between the antifermentative and antipyretic actions of these substances. In order of antipyretic doses, they stand as follows: phenol, 4½ to 6 grains; then hydroquinone, 12 grains; and pyrocatechin, 15 grains; weakest of all, resorcin, 46 grains. Owing to the fleeting reduction of temperature, and the subsidiary actions produced, Professor Lichtheim's opinion is that these drugs will not stand comparison as antipyretics with quinine and salicylic acid.

JAMES ANDERSON, M.D.

10. *Budde on Fuchsin in Chronic Albuminuria.*—Dr. Budde (*Ugeskrift for Läger*, series 4, Band ii) warns against attributing to fuchsin any influence over albuminuria; he thinks that the good results which other physicians have attributed to the use of this remedy, have been due to their having used it in cases of albuminuria running a rapid course, and in intermittent cases. He has several times had patients under treatment, in whom the morning urine was free from albumen, while the albumen showed itself later in the day, especially after exertion or after abundant meals; when such persons are exposed to injurious influences, such as exposure to cold, over-exertion, etc., the albumen continues for some time, but is removed by rest in bed and low diet. In all the cases of albuminuria in which Dr. Budde used fuchsin, the excretion of albumen remained unchanged; in one case, it was even considerably increased.

11. *Ellefsen on a Case of Intestinal Obstruction successfully Treated by Large Doses of Belladonna.*—Herr C. J. Ellefsen relates in the *Norsk Mag. for Lägevid.*, series 3, Band x, the case of a man, aged 48, who had been previously healthy, but for seven days had had no stool, and for the last two days had feculent vomiting. The abdomen was distended and extremely tender; the extremities were cold; the pulse frequent and very weak; no fæces could be found in the rectum. Various laxatives and enemata had been given without effect. He was ordered to take 4 centigrammes (about 0.6 grain) of extract of belladonna every hour. After he had taken five doses (3 grains) the vomiting ceased; and after another five doses he had a copious evacuation,

filling between three and four chamber-vessels. After this, he rapidly recovered. There were no symptoms of poisoning by belladonna.

A. HENRY, M.D.

12. *Dumas on the Action of Aconitine in Neuralgia.*—M. Dumas of Cette (*Bull. Gén. de Thérap.*, p. 287) has been studying the action of aconitine in facial neuralgia, and comes to the following conclusions. Crystallised aconite is a powerful medicine, very efficacious, especially in congestive facial neuralgia, and in some other neuralgiæ *a frigore*. It is useful in the majority of catarrhal affections, in which it may replace the various preparations of aconitine. It deserves to be preferred to the other kinds of aconitine, which are ill-defined and unequal in their action. It is but slightly efficacious in tic-douloureux of the face, in which it only produces temporary sedative effects. As with the other alkaloids, it is tolerated when it is methodically administered. It may be long continued without fear of the effects of an accumulation in the organism. It may be given in conveniently divided doses, and should be commenced in small doses, and progressively increased, unless in cases of tic douloureux. The average doses should be restricted to two milligrammes daily, while prepared granules containing a quarter of a milligramme of the alkaloid, or half a milligramme of the nitrate, deserve preference.

13. *Desnos on the Treatment of Exophthalmic Goître by Subcutaneous Injection of Duboisin.*—The writer (*Bull. de Thérap.*, 30 Jan. 1881) reports three cases in which there was an improvement, if not a cure. The dose of neutral sulphate of duboisine was from half a milligramme to a milligramme daily, or every two days, in a subcutaneous injection. The notable results observed were diminution of the conjunctival redness, of the palpitations and dyspnœa, and of the precordial distress. The goître ceased to pulsate, and the general health was improved; but after a time, unfortunately, there was an arrest in the improvement, and partial relapse.

14. *Bourneville and Ollier on the Physiological Action of Bromide of Ethyl in Epilepsy and Hysteria.*—MM. Bourneville and Ollier have studied the action of bromide of ethyl in hysterical and epileptic cases, and have arrived at the following conclusions (*Gaz. Méd. de Paris*, 26th March). 1. Dilatation of the pupil at the commencement of the inhalation of bromide of ethyl is not always present. 2. Complete muscular relaxation is exceptional. 3. Anæsthesia is produced in very variable degrees, according to the idiosyncrasy of the patient. 4. The secretions and the general condition do not seem to undergo any modification. 5. The pulse and the respiration are slightly accelerated. 6. A more or less marked trembling of the limbs may be produced during the inhalation, but does not continue subsequently. 7. Hysterical attacks are generally easily arrested by bromide of ethyl. 8. Epileptic fits may sometimes be stopped by giving the drug throughout the tonic period; frequently, inhalation has no effect. 9. In epilepsy, the regular employment of bromide of ethyl, administered in daily inhalations for a period of one to two months, very notably diminishes the frequency of the attacks.

15. *Menière on Purulent Discharge from the Ear.*—Dr. Menière, jun., recommends for chronic otorrhœa ten parts of Price's purest glycerine and one part of carbolic acid. From two to four drops are to be instilled into the ear, or applied on a roll of cotton-wool.

16. *Féréol on the Treatment of Neuralgia by Ammoniacal Sulphate of Copper.*—Two years since, M. Féréol made known the good effects of ammoniacal sulphate of copper in obstinate neuralgia of the fifth nerve. He now publishes (*Jour. de Thérap.*, March 1881) a report of eight new cases of permanent cure. The first case was that of a man, aged 71, who suffered from very troublesome supra-orbital and suborbital neuralgia. The cure, which was definitive at the end of a week only, had lasted for two months, and seemed likely to be permanent. M. Moutard-Martin tried the ammoniacal sulphate of copper in his wards at the Hôtel-Dieu, and had two cases of cure. The first was obtained in six days. The other case was that of a woman, aged 29, who had taken without effect nitrate of aconitine, iodide of potassium, etc. Ammoniacal sulphate of copper was administered to her daily in doses of 10 centigrammes (1½ grains), and the cure was manifest in twelve days. Another of M. Féréol's colleagues had the opportunity of treating a very severe suborbital neuralgia in the same way. The cure was not completed, but there was very pronounced improvement, and the existence of the patient was made tolerable. M. Maurice Raynard has had two successful cases, which he intends to publish in full. One was the case of a woman, aged 80, who had supra-orbital and suborbital neuralgia, with a complication of glaucoma. From the day after that on which the treatment commenced, there was a marked relief of the symptoms. Cure was complete at the end of a fortnight. It has now been permanent for more than a year, and there has been no relapse. Dr. Machano, of Venezuela, has sent to M. Féréol two cases of cure. In one of them, a woman, aged 23, suffered from neuralgia of the left auriculo-temporal branch, with mucous secretion and swelling of the external auditory meatus. M. Machano's other case, which was accompanied with suppurative otitis and intercurrent erysipelas, yielded to four days' treatment. Notwithstanding these successes from the use of ammoniacal sulphate of copper in a number of obstinate cases of neuralgia, M. Féréol owns that it is an untrustworthy drug, and that failures are frequent. Thus it has been known to succeed at first, and to fail subsequently, even in the same person; and in this case, static electricity, employed by the advice of M. Vigouroux, has had some curative effect. Up to the present time, M. Féréol has not been able to define the indication for ammoniacal sulphate of copper. He administers it, not in a solution, which is most disagreeable, and brings on vomiting, but in the form of powder, mixed with subnitrate of bismuth, in *cachets Limousin*. The ingestion of these wafers should be followed by a glass of milk. M. Blondeau proposes to associate a little opium with this drug to prevent vomiting.

17. *Michel on Indian Hemp in Uterine Affections.*—M. Michel, of Cavaillon, again calls attention (*Montp. Méd.*) to Indian hemp, especially in the treatment of uterine affections. He proposes the following formula for metrorrhagia: Tincture of Indian hemp, 2 grammes; simple syrup, 30 grammes; water, 220 grammes. A tablespoonful should be taken every five or six hours. M. Michel says that Indian hemp has a double action. In a moderate dose, it is exciting and stimulating; in large doses, it is sedative and calming to the extent of producing muscular relaxation and sleep. It is employed with advantage in the majority of nervous affections, and its usefulness is demonstrated in chorea, tetanus,

certain states of mental disturbance, delirium tremens, and the neuralgiæ. The muscular network of the uterus is especially sensitive to its action. Under the influence of Indian hemp, metrorrhagia stops, and labour is stimulated to such an extent that the question arises if it should not take the place of ergot.

18. *Gosselin and Bergeron on the Antiseptic Properties of the Alcoholic Solution of Gaultheria.*—Professor Gosselin and M. Albert Bergeron have been experimenting on the essence of gaultheria, which is also named essential oil of gaultheria, or essence of winter-green, and is derived from a plant of the family of Ericaceæ (*gaultheria procumbens*) (*Archives Gén. de Méd.*, Jan. 1881, p. 16). This essence of winter-green diffuses an agreeable odour, and has already been utilised in perfumery. It is not soluble in water, but only in alcohol. MM. Gosselin and Bergeron use two solutions. Solution No. 1 contains 5 grammes of oil of gaultheria in 50 grammes of alcohol of 60 degrees. Solution No. 2 contains 2.50 grammes of oil of gaultheria to 100 grammes of alcohol, and 50 grammes of water. These solutions, which are antiseptic, have been successfully employed in the treatment of wounds by MM. Gosselin and Perier.

19. *Blondeau on Euonymin in the Treatment of Pseudo-Membranous Colitis.*—Dr. Blondeau recently brought before the Société de Thérapeutique (*France Méd.*) a case in which he had employed euonymin in one of his patients suffering from pseudo-membranous colitis, which had been vainly treated by the most energetic remedies. He prescribed: euonymin, 5 centigrammes (¾ grain), extract of hyoscyamus, 10 centigrammes (1½ grains), made into two pills, one to be taken morning and evening. After six days of this treatment, the patient had regular motions, and recovered her health, which she had lost for some months.

20. *Villard on Cannabis Indica in Delirium Tremens.*—Dr. F. Villard (*Le Prog. Méd.*, No. 8, 1881) describes a case in which eighty grains of chloral were given within ten hours without producing rest, and then extract of opium to the amount of two to three grains, also without result. Extract of Cannabis Indica, to the amount of two grains every hour until eight grains had been taken, gave relief. This dose, which is about four times that recommended in the books, was given because, as Dr. Villard says, a smaller dose—or, at least, too small a dose—would have produced a stimulant instead of a narcotic effect. He lauds the effect of the cannabis very highly.

21. *Tauret on Saccharocarbonate of Iron.*—M. Ch. Tauret (*Bull. Gén. de Thérap.*, vol. i, 1881, p. 127) has discovered a crystallisable compound of carbonate of iron and sugar, to which he gives the above name. It is found in the interior of Vallet's mass after two years, and contains 18 per cent. of carbonate of iron. It is easily soluble in feebly acid solutions.

22. *Vidal on the Treatment of Keloid by Scarification.*—Dr. Vidal presented before the Société de Chirurgie (*Bull. Gén. de Thérap.*, vol. i, 1881, p. 136) a man, aged 48, suffering with keloid, and under treatment by scarification. Vigo's plaster douches, etc., had been of no avail, and the tumour gave rise to considerable pain, for which multiple scarifications in parallel and transverse lines were practised. To M. Vidal's surprise, the tumour became very much reduced in size, and the success gained in this case encouraged him to try the same procedure in other instances, which also resulted favourably.

23. *Bochefontaine on a New Sedative (Erythrina).*—Some experiments with the bark of the *Erythrina corallodendron*, a large leguminous tree growing in the north of Brazil, where it bears the name of 'mulungu', have been reported by M. Bochefontaine (*Comptes Rendus*, tome xcii). In its native country the bark is popularly used as a sedative and hypnotic, under the form of a decoction, tincture, and extract. M. Bochefontaine found that a decoction and a filtered aqueous solution of an extract gave precipitates characteristic of an alkaloid, which he has provisionally named 'erythrine'. Physiological experiments made by subcutaneous injections of the aqueous liquid showed that this acted upon the central nervous system by diminishing or abolishing its normal function. M. Bochefontaine concludes, therefore, that the bark possesses the sedative properties attributed to it in Brazil, and that these are due to the alkaloid it contains. Should any further contribution be made to the history of this alkaloid, it will be as well to remember that the name 'erythrin' is already used as a synonym for erythric acid, occurring in *Roccella tinctoria* and other lichens, whilst 'erythrine' is a synonym for cobalt bloom ($Co_3AsO_4 + H_2O$).

24. *Howard on Certain Special Uses of Iodoform.*—Dr. H. C. Howard, Champaign, Illinois, recommends the use of iodoform (*Physician's and Surgeon's Investigator*, Buffalo) in the following cases: chancre and chancroid, herpes circinatus, herpes zoster, and herpes of the prepuce, and the granulated lids of gonorrhœa in the male. In chancre and chancroids he directs as follows. 'Take of iodoform one hundred parts, sugar of milk, two hundred parts, thymol one part. Let the above be thoroughly mixed and reduced to an impalpable powder. The glans and prepuce must be thoroughly clean and dry. Then pack the ulcerated surfaces full with this powder, dust it over the surrounding parts, and secure it with a light bandage. Repeat the application as often as the parts become moist from new discharges. Ordinarily about three applications will be required every day for the first two or three days; then, as healing continues, they may be repeated less frequently.' In the various forms of herpes he uses the following. 'Dissolve one drachm of iodoform in one half ounce of the oil of eucalyptus, and paint the diseased surface with this solution. Two or three applications will usually effect a cure.' In granulated lids, 'Apply iodoform and sugar of milk, one part to five parts, directly to the everted lids, with a soft brush. This occasions no smarting or pain, and often cures cases of months' standing in two or three weeks.' In gonorrhœa, he uses the iodoform in suppository form, as follows. 'Mix one half drachm of finely powdered iodoform with one ounce of the butter of cocoa. This may be kept in a shallow ointment jar. I have a thin silver tube, about one-fifth inch in diameter, with a closely fitting piston. This tube is about eight inches long. When a suppository is needed, I retract the plunger or piston to a point from the distal extremity of the tube, corresponding to the length of the required suppository. Then fill the lower open end of the tube by plunging it again and again forcibly into the jar containing the material for the suppository, and packing it solid by downward pressure of the piston. Then I apply the suppository by passing the end of the tube into the urethra, and force it out by pushing in the piston, taking care to pass the suppository above the inflamed part. This treatment of gonorrhœa I have used for nearly two years, and can testify to its great efficacy; it is a suitable substitute for injections, and is more sure in its effects.' He also suggests the

following method of applying this remedy to the uterine cavity in cases of catarrh (*Chicago Med. Rev.*) Mix a half-drachm of iodoform, in fine powder, with an ounce of cacao butter, and keep it in a shallow ointment jar. Procure a thin silver tube about one-fifth of an inch in diameter and eight inches long, with a closely fitting piston. When an intra-uterine suppository is needed, withdraw the piston for a short distance, and fill the open end of the tube by plunging it forcibly into the material in the jar. The mass can then be compressed, if need be, with the piston. By passing the end of the tube into the cervical canal, and pushing on the piston, the suppository can be placed in contact with the catarrhal surface, and it there melts readily, and causes no pain. [Mr. Watson Cheyne has also used iodoform bougies with success in the treatment of gonorrhœa. (See LONDON MEDICAL RECORD, Aug. 15, 1880, p. 337.) His observations and those of Dr. Howard appear to have been independent of each other.]

25. *Arnold on the Therapeutic Value of Tartar Emetic.*—Dr. A. B. Arnold, of Baltimore, thinks this remedy has fallen into undeserved neglect. In inflammatory croup, it is capable, if used early, of keeping it in the catarrhal stage, and preventing its passage into the membranous form. He gives in these cases one-twelfth of a grain every hour to a child. To one patient, aged 6 years, he gave one-fourth of a grain every hour, with excellent results.

26. *Barton on Glycerine in Trichinosis.*—Dr. J. M. Barton states (in the *American College and Clinical Record*) that four cases of trichinosis have recovered under large doses of glycerine. This treatment, which has been very widely recommended, is based on the fact that glycerine, applied to living trichinæ, at once shrivels them up and kills them.

27. *Curtis on Walnut-Leaves in Diphtheria.*—Among the many remedies that are being constantly brought to the front in the treatment of diphtheria, may be mentioned a decoction of the leaves of the black walnut (Juglans nigra). Dr. Curtis, of St. Mary's Hospital, Quincy, Illinois, has made trial of this treatment for some time past, and reports the results in an article in the *Boston Med. Jour.*, March 10, 1881. He was led to the use of walnut-leaves from the fact that they were highly recommended by M. Nélaton in the treatment of malignant pustule. His success, in the cases of diphtheria in which he has used it, warrants a further trial of the remedy.

28. *Andeer on the Use of Resorcin in Affections of the Stomach.*—Andeer gives the result of his observation on 300 cases, detailed histories being given of 15 (*Zeitsch. für Klin. Med.*, series 11, p. 297). The cases were of a chronic nature, and solutions varying from 1 to 5 per cent. in strength were employed (chiefly 3 per cent.) He recommends its use chiefly on account of its harmless nature when compared with carbolic or salicylic acid, and also for its peculiar action on the mucous membrane, which heals without the formation of a cicatrix after cauterisation with resorcin. It is also a hæmostatic, but acts weakly as a preventer of fermentation (see LONDON MEDICAL RECORD, Oct. 15, 1880, p. 419, and April 15, 1881, p. 146). G. H. MAKINS.

29. *March on some New Uses of some Old Remedies.*—In the *Med. Times and Gaz.*, Feb. 1881, pp. 237, 319, Dr. Henry Colley March gives an abstract of a paper read before the Manchester Medical Society, in which he detailed his experience of the use of several well-known drugs in the treatment of diseases for which they were not generally employed. In a severe case of sciatica, which had resisted the hypodermic use of morphia, copaiba, as mixture, was given in scruple doses every four hours. In twenty-four hours the pain was gone, and the patient rebuked the doctor for not having given the remedy sooner. Since this case, many others have yielded to the same treatment. [In the *Bull. Gén. de Thérap.*, July 30, 1861, Dr. Caudmont speaks highly of the value of copaiba, combined with cubebs, in removing vesical and prostatic neuralgia, the pain vanishing in twenty-four to forty-eight hours.—*Rep.*] Dr. March next speaks of the value of lime in chronic after-gout, effecting a rapid subsidence of the swollen foot and turgid veins, and causing the strength of the joint, with the appetite, to return very speedily. The formula is, ℞ Liquoris calcis saccharati, ʒiv; acidi citrici, ʒiv; tincturæ aurantii ʒij; aquam ad ℥iij; M. ℞. Sodæ bicarb., ʒi; potassæ bicarb., ʒi; ammoniæ carb., ʒss; aquæ, ℥vi; M. A tablespoonful of the acid mixture, with two of the other, to be taken in effervescence. Clinically speaking, in the cases indicated, the citrate of lime appears to have a special tonic action. In many cases of dysentery that occur in this country, Dr. March has found half-minim doses of liquor hydrargyri bichloridi, given every half-hour, to act like a charm. Indeed, Dr. March looks upon the remedy as a specific tonic in such cases. The only objection is that it is too pleasant to please many, and, therefore, it can be easily 'nastified' by adding mint-water. The effect of chloral in typhoid fever and diphtheria has been, in Dr. March's practice, most marked, the delirium and other nervous symptoms calming down, and the throat-symptoms rapidly yielding. In conclusion, Dr. March calls attention to the vast value of belladonna, as recommended by Dr. Fothergill, in cases where the respiratory nerve-centres are overwhelmed, as in suffocative bronchitis.

30. *Thorburn on Resuscitation from Chloroform Syncope by Inverting the Body.*—In the *Brit. Med. Jour.*, April 1881, p. 559, Dr. Thorburn relates how, with a patient who remained for three or four minutes in a condition of apparently fatal syncope, following chloroform, given for an uterine operation, inversion of the body restored the cardiac pulse, but not the respiration. On assuming the recumbent posture, the pulsation gradually grew more feeble. The patient was again placed on her head for two minutes, when strong palpitations were felt, and in a short time a few gasps followed, just as in infant resuscitation [That placing the head downwards, in chloroform syncope, is a most valuable procedure, the experience of numerous observers does not leave the shadow of a doubt, as the cases referred to in the *Med. Digest*, Section 440: 1, and, since that work was published, in the *Brit. Med. Jour.*, vol. ii, 1879, p. 100, and in the *Med. Times and Gaz.*, vol. ii, 1879, p. 518, convincingly prove. Dr. Moxon, in his Croonian Lectures, refers to the subject thus. 'I have never known anything more than discomfort occur from this cause (head downwards), but it is well to remember the cerebro-spinal fluid, when, in chloroform syncope, etc., one is tempted to cause a flow of blood to the head by lowering it below the level of the body; for, in so lowering the head, you delay venous circulation, and send water, as well as blood, towards the brain, thus lessening the blood-changes there, which you wish to increase' (*Brit. Med. Jour.*, April 1881, p. 496). May not the explanation of the heart's impulse, in Dr. Thorburn's case, so readily returning, be connected with that marvellous action of the choroid plexus, so graphically described by Dr.

Moxon in the *Journal*, at p. 493, whereby the quantity of blood, supplied to the brain, is regulated by means of greater or less pressure of the more or less vascular choroid plexus, in the cornua of the fourth ventricle, upon the roots of the vagi, and thus diminishing or increasing the force of the heart's action? When the engorged vessels of the choroid have arrested the heart by pressure on the roots of the vagi, may not this pressure be relaxed by inverting the patient, and so allowing the heart to resume its pulsations? Subsequently, the lungs resume their proper functions. If the brain, however, be in a state of anæmia in chloroform syncope, as generally supposed, then the rationale of inverting the patient is more readily understood.—*Rep.*]

31. *Kemp on the Use and Abuse of Salicylic Acid.*—In the *Brit. Med. Jour.*, April 1881, p. 510, Dr. George Kemp suggests the administration of salicylic acid in beef-tea or Liebig's extract, the only recognition that the drug is present being 'you have put too much seasoning in my soup'. Dr. Kemp thinks that eight grains is the maximum dose, repeated as frequently as the exigencies of the case may require. In the form of enema, and also as an external application, Dr. Kemp has found the acid very efficacious.

32. *Spiers on a Ready Method of applying Strong Nitric Acid as a Caustic.*—Mr. W. R. Spiers, in the *Practitioner*, April 1881, p. 266, describes a very ingenious way of applying this caustic to a nævus, which, in the case cited, was situated at the outer canthus of a child six months old. The mouth of a two-ounce vial was broken off close to the neck, and firmly pressed over the nævus, which was forced well up into the neck of the vial. Then the acid was freely applied by means of a pipette, one application effecting a perfect cure. [In the LONDON MEDICAL RECORD, Oct. 1880, p. 403, is recorded the plan adopted by Mr. Massiah of applying nitric acid to nævi by the use of capillary tubes filled with the acid.—*Rep.*]

33. *Shelly on the Value of Carbolic Acid and Iodine in Typhoid Fever.*—Mr. C. E. Shelly confirms, from the results of a short series of cases, the favourable opinion that others have formed regarding the value of carbolic acid given internally, either alone or combined with iodine (*Brit. Med. Jour.*, April 1881, p. 554). The dose was one or two minims of carbolic acid, with two or three of tincture of iodine, combined with half a drachm of simple syrup and an ounce of lemon-water, every two, three, or four hours. The unanimity with which all the patients agreed in expressing themselves as feeling better after the first two or three doses, was as gratifying as it was remarkable. [In the LONDON MEDICAL RECORD, 1878, p. 175, and 1880, pp. 141, 306, are several interesting papers on the same subject.—*Rep.*]

34. *Woakes on Fluoric Acid in the Treatment of Bronchocele.*—Dr. Edward Woakes, in the *Lancet*, March 1881, pp. 448, 497, 537, gives the results of his experience of fluoric acid in the treatment of goître. Of twenty cases, seventeen were cured. The treatment extended over a lengthened period. Fluoric acid is not to be regarded as a specific, but rather as a basis of constitutional treatment, with which iron, in anæmic subjects, may be advantageously combined, while, coincidentally with its internal administration, recourse may be had to such local procedures as experience has shown to favour dispersion of goître. In many cases, the effect of the fluoric acid was immediate. In one case, a large fibrous goître that had existed for two years was markedly diminished in a week, by the use of half-drachm doses of the acid three times a day. In other cases, improvement goes on up to a certain point, and then the tumour remains stationary. Then an injection of iodine into the substance of the tumour causes absorption to recommence, and often it is only necessary to continue with the acid, or perhaps to employ a second injection. The rationale of the *modus operandi* of fluoric acid, is that it restores the lost contractile function of the impoverished ganglia that supply the *nervi vasorum*, either by acting as a physiological spur to their function, or by furnishing a deficient element in their composition, one without which the nerve currents, generated in them, are reduced to *nil*. [In the *Lancet*, Jan. 1855, p. 32, Dr. John Hastings gave the notes of three cases of phthisis treated with fluoric acid in combination with oxalic acid. All improved under treatment, but the dose of the acid was only one-forty-eighth of a grain. In the *Brit. Med. Jour.*, May 1880, pp. 681, 720, a warning is given regarding the acid, as wounds arising from it are so very difficult to heal.—*Rep.*]

35. *Clarke on the Treatment of Gonorrhœa.*—In the *Lancet*, March 1881, p. 499, Mr. T. F. Clarke suggests, during the active stages, the usual saline mixtures, with tepid water injections. When all active inflammation has abated, five minims of the tincture of the perchloride of iron and five minims of the tincture of cantharides thrice a day, with an injection of sulphate of zinc, two grains to the ounce, yield a most satisfactory result. In one case, five days after discontinuance of the mixture, symptoms of strangury set in; in another patient, two doses of the mixture set up strangury. In each case, the gonorrhœa was effectually cured.

R. NEALE, M.D.

MEDICINE.

RECENT PAPERS.

1. WARFVINGE.—Statistics of Pneumonia. (*Hygiea*; and *Nord. Med. Arkiv*, Band xiii, Häft 1.)

2. FINNE, G.—A Case of Sarcoma of the Lung. (*Norsk Mag. for Lägevidensk.*; and *Nord. Med. Arkiv*, Band xiii, Häft 1.)

3. BACKER.—A Cardiac Sound Heard at a Distance, a Succussion Phenomenon in Pyopneumothorax. (*Norsk Mag. for Lagevidensk*, series 3, Band x; and *Nord. Med. Arkiv*, Band xiii.)

4. LEVEN.—The Relation between the Stomach and the Nervous System. (*Revue de Thérap.*, p. 158.)

5. TROISIER.—On Meningeal Hæmorrhage. (*Gaz. Hebdom. des Sciences Méd.*, p. 557.)

6. SCHUYLER.—On Small-Pox. (*Med. and Surg. Rep.*, Feb. 19, 1881.)

7. DE GRANGÉ.—Pneumothorax following Excessive Respiratory Exertion. (*Jour. des Sciences Méd. de Lille.*)

8. POTAIN.—On Paralysis Consecutive on Digestive Troubles. (*Gaz. des Hôp.*, 1881.)

9. HUCHARD.—On Hysterical Paraplegia without Anæsthesia. (*Paris Méd.*, April 21.)

10. MOXON. — On One Cause of Sudden Death. (*Brit. Med. Jour.*, April 1881, p. 496.)

11. FOTHERGILL, J. MILNER.—On Diagnosis of Fatty Heart. (*Practitioner*, April 1881, p. 268.)

12. MOXON.—Why Paraplegia affects the Lower Limbs. (*Brit. Med. Jour.*, April 1881, p. 497.)

13. DUCKWORTH, D.—On Gout. (*Brit. Med. Jour.*, March 1881.)

14. DRURY, C. D.—On High-heeled Boots as Causing Backache. (*Brit. Med. Jour.*, March 1881, p. 467.)

1. *Warfvinge on the Statistics of Pneumonia.*—Dr. F. W. Warfvinge has published in *Hygiea* for 1880 (*Nord. Med. Arkiv*, Band xiii, Häft 1) the statistics of 69 cases of pneumonia observed by him in the Sabbatsberg Hospital during 1869, and of 546 other cases under his care in two other hospitals in Stockholm during 1867-78. Of the latter, 418 were males, and 128 females. It appears from these statistics, that pneumonia appears with almost similar frequency in December, January, February, March, and April; that it becomes more than twice as frequent in May, then diminishes in frequency in June, and during the months from July to November occurs only sporadically. More than two-thirds of the cases are met with in the winter and spring months, and less than one-third in the summer and autumn. The pneumonia was right-sided in nearly two-thirds of the cases (63.2 per cent.); left-sided in less than one-third (29.1 per cent); and double-sided in 7.7 per cent. (one thirteenth). In nearly three-fourths of the cases the lower lobe of the lung was affected, and in 43 per cent. this was the exclusive seat of the disease. In 19 per cent., the pneumonia was limited to the upper lobes, which were affected in not quite two-fifths of the cases. In 22 per cent. of the cases the termination of the pneumonia, as indicated by the fall of temperature, took place on the seventh day; in 20 per cent., on the sixth; in 15 per cent., on the eighth; and in 12 per cent., on the fifth. In 8 per cent. of the cases the pneumonia was complicated with delirium tremens, and in these the mortality was 39.6 per cent. In 22 cases there was enteritis, the death-rate being 31.8 per cent. Of 244 cases in which the urine was examined, it was found to be albuminous in 47 per cent., with a percentage mortality of 20. In 59 per cent. there was no albumen, and here the mortality was 6.2 per cent. Altogether, the mortality increased in proportion to the albuminuria. The death-rate in all the cases was 16.85 per cent.—17.7 in males, and 14.1 in females. It increased steadily with age, being 2 per cent. in patients under twenty years, and 34 in those above fifty. In the cases of double-sided pneumonia it was 43.9 per cent.; in right-sided, 15; and in left-sided, 13.9. The influence of rise of temperature on the fatal result was not of much importance. The percentage of mortality varied little under dissimilar temperatures, except when a maximum temperature of 40.5 to 41 Cent. (104.9 to 105.8 deg. Fahr.) was reached. The author concluded from this, that one can scarcely find any valid indications for the use of the cold bath in the treatment of pneumonia, as the rises of temperature are generally small and of short duration; and as the danger to the patient depends less on the violence of the disease than on his want of power to resist it, patients of advanced age, and those who are the subjects of other diseases, succumbing more frequently.

2. *Finne on a Case of Sarcoma of the Lung.*—Dr. G. Finne relates, in the *Norsk Mag. for Lägevidensk.* (*Nordiskt Med. Arkiv*, Band xiii, Häft 1), the case of a married woman, aged 45, who was admitted to hospital on October 10th, 1879. In the spring of the same year, her right eye had been removed, on account of sarcoma of the bulb. Three weeks before admission, she had continuous pain in the back on the right side. Severe cough, with scanty expectorations, set in, and she had severe dyspnœa. She could neither lie on the right side, nor assume the sitting posture. On admission, respiration was 44 per minute, and the percussion-sound on the right side of the chest was dull from apex to base. The dull sound extended a little over the middle line at the manubrium sterni; behind, there was dulness from the upper border of the scapula to the base of the lung. On consultation, bronchial *râles* were heard. During the patient's stay in hospital the pleura was punctured several times, with temporary relief on each occasion; various quantities of more or less blood-stained fluid were evacuated. On the 31st October puncture was made several times, but only a few drops of blood escaped, and, when the cannula was removed, it brought away small shreds of tissue, having the microscopic structure of granulation tissue. The patient died on November 6th. At the necropsy, sarcoma was found in the lung and pleura; the whole of the right pleura was filled with a number of rather vascular tumours, as large as nuts. Metastatic deposits were found in the heart, liver, and kidneys. The diagnosis of this case could be made during life, as the fluid removed by puncture was always bloody; as, although puncture was made at several points, the pleura could be only partially emptied of its contents; and, finally, because the previous sarcoma of the eye pointed to the nature of the disease.

3. *Backer on a Cardiac Sound heard at a Distance as a Succussion-Phenomenon in Pyopneumothorax.* — A. Backer (*Norsk Mag. for Lägevidensk.*, series 3, Band x, and *Nord. Med. Arkiv*, Band xiii) observed in a patient with left-sided pyopneumothorax (following pleuropneumonia and empyema) that, on auscultating the part between the right side of the sternum at the insertion of the fourth and fifth ribs and the parasternal line, when the patient was recumbent, a cracking, rattling, metallic sound was heard, like that produced by striking a pocket containing small pieces of silver coin. When the patient sat up, there proceeded from the same spot a cracking sound, synchronous with the heart-beat. It was heard distinctly over the whole sick-room, and resembled the sound produced by striking water with the flat hand, or when a fish lashes the surface of the water with his tail. When the patient lay down, the sound ceased. The patient died two days afterwards. There was no necropsy. Herr Backer considers that the sound heard when the patient was sitting up was caused by the pleura containing air and pus coming into more extensive contact with the heart, by which a rhythmic succussion-sound was produced. A. HENRY, M.D.

4. *Leven on the Relation between the Stomach and the Nervous System.*—Dr. Leven has, under this title, made the following communication to the Society of Biology (*Revue de Thérap.*, p. 108). The reaction of the stomach on the nervous system has not hitherto been described, although the clinical facts which demonstrate them are very numerous; and when dyspepsia lasts for some time in an intense degree, the whole nervous system is upset. Hyperæsthesia is the earliest and the most common amongst the nervous phenomena due to dyspepsia. It has hitherto been referred to hysteria, but this is a clinical error. It is a tributary of dyspepsia alone. Out of 100 dyspeptic patients of whom Dr. Leven has classified the cases, he reckons 53 men and 47 women. Hyperæsthesia generally appears in men at the age of from 30 to 40, and is often met with after 50 or 60 years of age. When hyperæsthesia exists on the right or the left side, complicated with tinglings and cerebral phenomena, as vertigo, headache, etc., physicians generally fear the existence of some cerebral affection. Hyperæsthesia develops itself in a parallel manner with the dyspepsia, in-

creases with it, and disappears with it. Many errors of diagnosis are made, because up to the present the origin and the effect have been misconstrued. In women, this symptom appears sooner than in men. Hyperæsthesia is the outcome of dyspepsia only. If it appear in a hysterical patient, it is because the hysteria is complicated with dyspepsia. The sign proper to the hysterical neurosis is anæsthesia, which Dr. Leven has never observed in gastric disease. Out of 53 dyspeptic men, 37 showed hyperæsthesia; out of 47 women, there were 44 whose skin and muscle were hyperæsthetic. It may almost be said that, according to statistics, this symptom is as frequent in men as in women, and that it is especially in men arrived at maturity that it is found. Dr. Leven has, however, observed it in children, both boys and girls, aged from 8 to 10 years. Dyspepsia, while it is only characterised by local symptoms, such as generation of gases, and dilatation of the stomach, is a malady which is quickly cured, but it becomes obstinate so soon as the nervous system is invaded. Up to the present time, these scattered symptoms have occupied the attention of the physician, because dyspepsia has only been treated as a functional disturbance; but it is easy to comprehend that, the stomach being an organ subject to disease, these congestions are the source of multiple symptoms, of which the greater number make their appearance in the nervous system.

5. *Troisier on Meningeal Hæmorrhage.*—In a note which precedes his report of a case of meningeal hæmorrhage in heart-disease, M. Troisier recalls to mind the division of meningeal hæmorrhages into primary and secondary (*Arch. de Physiol.* 1881, No. 2). In the former, the effusion of blood is the initial fact; in the latter, it supervenes after pachymeningitis by the rupture of the vessels contained in the membranes. The subject of M. Troisier's case was a woman, aged 43, who had long been the subject of rheumatic diathesis. She was found to be suffering from endocarditis (systolic murmur at the apex), with slight pericarditis, and from severe bronchitis, with congestion of the bases and pneumonia, and with persistent diarrhœa. The sense of hearing was weakened, but the intellectual faculties remained intact. These phenomena increased rapidly, and the patient suffered from a continual agitation, with subdelirium, which attained its height during her last night. Exudations were found on the visceral surface of the peritoneum; the left auricle was distended by clots; there was a narrowing which diminished the mitral orifice by half; its valve was thickened, etc. With regard to the brain, a reddish clot was diffused over the anterior two-thirds of the hemispheres on the dura mater, with which no adhesion had formed. Its total volume scarcely excelled that of a hazel-nut. M. Troisier was not able to discover its starting point, either in a rupture of the artery or veins, or in an old coagulum of the sinuses. The case was, therefore, one of subarachnoidal effusion formed shortly before death, and about three days old. Its configuration made it very probable that it had commenced suddenly and had occurred at once. With reference to its pathogenesis, M. Troisier recalls the frequency of encephalic venous stases in the last stage of cardiac affections, though this state would have engendered free hæmorrhage; beside which, the phenomena of stasis were not exaggerated in his patient, especially in the system of the superior vena cava. The excess of pressure is thus but one of the factors of hæmorrhage. It is, consequently, in organic failure that we must seek the explanation of that lesion, in which modifications of the structure of the capillaries, as well as changes in the blood, must have participated.

6. *Schuyler on Small-Pox.*—From a *résumé* of a service of four months at the small-pox hospital in Troy, New York, Dr. Schuyler has contributed some interesting facts on the etiology and symptomatology of small-pox (*Med. and Surg. Rep.*, Feb. 19th, 1881). The whole number of cases treated was two hundred and sixteen. The average mortality was about 22 per cent., but was greatest among infants, 45 per cent. dying. The lowest rate was between the ages of forty and fifty (12 per cent.) Precursory signs, excepting the fever, were in some cases wanting, and the pronounced headache and backache were wholly absent. It was also observed that when the eruption did not appear until the fourth day, it was invariably discrete. In this form, it was often difficult to find umbilicated vesicles at any stage of the disease. The form of eruption appearing in clusters or patches, and referred to by Bartholow as 'corymbic', was seen in one instance. A cluster, of the size of a silver dollar, appeared upon the face, upon the left cheek, and there were a few isolated vesicles at the margin of the hair on the forehead. A number of patches were also present upon the legs and arms, the skin between them being wholly destitute of eruption for a distance, in some places, of at least twelve inches. The vesicles in some of the clusters were coherent, or in immediate contact, without being really confluent. In the hæmorrhagic variety, death was inevitable, as a rule; it usually took place before the period of pustulation was reached. Two adults recovered, one of whom suffered from abscesses for a month afterwards. Two cases were admitted during a pregnancy, of five and six months respectively; one was hæmorrhagic, the other discrete. The former aborted on the fourth day and died on the fifth; the latter made a good recovery without death to the fœtus. In two cases of the confluent variety, the eruption was confluent on every part of the body—one was a young woman aged 20, the other a girl aged 15. The former died on the tenth day of the disease, the latter on the ninth day. In those cases where the patients were apparently suffering from œdema of the glottis, no diphtheritic membrane was observed, not even in the hæmorrhagic form. In the treatment, nothing gave so much comfort during the stage of desiccation as a warm bath, the patient frequently begging to have it repeated. In the hæmorrhagic variety, tincture of the chloride of iron with turpentine seemed to be given with good effect.

7. *Delgrange on Pneumothorax following Excessive Respiratory Exertion.*—This case is described by Dr. Delgrange in the *Jour. des Sciences Méd. de Lille.* A youth, aged 18, possessing an excellent constitution, amused himself one evening in exhibiting the power of his chest and the force of his breath. Suddenly he felt a sudden pain in his left side, his face became blanched, and he experienced great oppression. During the night he made attempts at vomiting, and, in one of these efforts, was seized with a sense of something tearing in his side. Syncope immediately followed. Dr. Delgrange was called in, and found unmistakable evidences of pneumothorax. Under appropriate treatment, the patient recovered after about eight days.

8. *Potain on Paralysis Consecutive on Digestive*

Troubles.—M. Potain (*Gaz. des Hôp.*, 1880) has observed a patient in whom, after a gastro-intestinal catarrh, consecutive on the action of damp, cold, and bad nourishment, paralysis of the upper and lower limbs, and of the muscles of the neck, developed itself. This paralysis could neither be referred to hysteria nor to locomotor ataxy, of which the patient did not show any symptom. It was entirely in relation with the gastro-intestinal catarrh, and, in all probability, was the result of a reflex action on the spinal marrow.

9. *Huchard on Hysterical Paraplegia without Anæsthesia.*—Dr. F. Huchard (*Paris Méd.*, April 21st) has published a paper in which he reports two conclusive observations of M. Sée and M. Desnos, in which paraplegia, although of a hysterical character, was not accompanied by anæsthesia. This is, of course, very rare, since it has been habitually observed that hysterical disorders of this kind are almost always accompanied by more or less anæsthesia. His conclusions are, that there exist cases of paraplegic hysteria without anæsthesia of any part of the surface of the body, and this throughout the whole duration of the paraplegia. Like hysterical paraplegia with anæsthesia, it may appear suddenly, and be cured in the same way. It may be the first manifestation of hysteria, and the only one; and for a long time renders its diagnosis often very difficult. The absence of anæsthesia during a long period is, however, a very rare fact, and one the possibility of which has been doubted by most authors. It is impossible to say what is the ultimate end where the anæsthesia manifested itself later, or by its habitual symptoms, and where the anæsthesia has subsequently become developed. The rapid or sudden occurrence of symptoms of paraplegia in a woman or young girl, limited to movement, and existing independently of all other symptoms, should make the physician think of hysteria, even when there is no trace of anæsthesia. In fact, the evolution alone of the disease, and its sudden cure, will often permit the verification of the diagnosis.

10. *Moxon on One Cause of Sudden Death.*—In the course of his Croonian Lectures on the Influence of the Circulation on the Nervous System, which deserve the most careful study of every practitioner, Dr. Walter Moxon (*Brit. Med. Jour.*, April 1881, p. 496) reports a case in which a warty growth completely blocked up the passage leading from the fourth ventricle of the brain to the spinal cord, thus causing intraventricular dropsy. The sudden death that took place, Dr. Moxon believes to have been due to inhibition of the heart through pressure upon the pneumogastric centres.

11. *Fothergill on the Diagnosis of Fatty Heart.*—In the *Practitioner*, April 1881, p. 268, Dr. Milner Fothergill enters fully into the diagnostic symptoms of fatty heart, distinguishing, in his usual forcible language, between a fatty and a starved heart, to discriminate between which is most important. Each is the effect of malnutrition. One, however, is a perfectly curable disease; whereas fatty degeneration, with atheroma of the arteries generally, and of the coronary arteries especially, is a truly senile change, which carries with it the gravest prognosis. In fatty heart, as Dr. Da Costa describes, 'Our power to recognise the change during life has not kept pace with our powers to recognise it after death. There is as yet no sign discovered by which we can probably say that the dangerous disorganisation of the muscular fibres of the heart is in progress. We may, however, suspect it, if the signs of weak action of the heart—feeble impulse and ill-defined sounds—can exist with oppression, with a tendency to coldness of the extremities; with a pulse permanently slow or permanently frequent and irregular; and if they be met with in a person who is the subject of gout, or of a wasting disease, or is very intemperate, or has arrived at a time of life at which all the organs are proved to undergo decay. Something more than a suspicion is warranted if, in addition, there be proof of atheromatous change in the vessels, or of fatty degeneration elsewhere, such as an arcus senilis; or if it be ascertained that the patient suffers from pain across the upper part of the sternum, and from paroxysms of severe pain in the heart, and that he sighs frequently; that he is easily put out of breath; that his skin has a yellow greasy look; and that he is subject to syncope, or to seizures, during which his respiration seems to come to a standstill; and that he is liable to vertigo, or to be stricken down with repeated attacks having the character of apoplexy, save that they are not followed by paralysis.' Fatty degeneration of the heart is seldom idiopathic; ordinarily, it is a part of a wide-spread degenerative change. In those very rare cases where there exist pericardial adhesions over a coronary artery, and the heart-wall is thus deprived of its proper supply of nutrient blood, then it is a disease *per se*. The fatty heart is the usual attendant of senile degenerative changes. 'Heart-starvation' closely simulates, in its symptoms of feeble impulse and dyspnœa, fatty degeneration; but here the signs of degenerative changes elsewhere are absent, while those of defective nutrition are plainly indicated by loss of appetite and impaired sleep, with deranged liver. It is in consequence of the unfamiliarity with the heart considered as a muscle, liable with other muscles to be affected by malnutriton, that errors in diagnosis may occur.

12. *Moxon on the reason why Paraplegia affects the Lower Limbs in preference to the Upper.*—Dr. Walter Moxon, in the course of his Croonian Lectures (*Brit. Med. Jour.*, April 1881, p. 497), gives the following explanation of the occurrence of paraplegia, as seen in the workers of caissons. The blood-supply of the spinal cord is derived from the vertebral arteries within the skull, two slender arteries running on the back of the cord, and one on the front, extending the whole length of the cord. It is necessary to reinforce such slender arteries by others wherever possible, and these reinforcing vessels run along in the upper part of the cord, with the short nerve-roots, every segment of this portion of the cord being thus furnished with branches from the spinal arteries from above, and the reinforcing arteries from below. When, however, we approach the tip of the cord, the supply from below becomes very precarious; because, upon the long strands of the cauda equina, the small arteries are too narrow and too long to reinforce the cord with any certainty. Hence the tip of the cord has its supply of blood only from above, and deficiently even there on account of the very great length and tenuity of the vessels. Hence, in caisson-workers, when the system is relieved from the very great pressure that drove the blood-current with velocity through the cerebro-spinal system, the tip of the cord suffers most from the resulting anæmia. This anatomical distribution of the vessels to the cord throws great light on many obscure nervous diseases affecting this part of the body, it being the impediment to the exceedingly and peculiarly difficult blood-supply of

the caudal end of the cord that leads to paralytic weakness of the lower limbs in many cases, and which is best met by means that tend to improve the circulation. Dr. Moxon suggests that the spinal cord is thus scantily supplied with vessels, in order that we should sit down when we have walked enough, and lie down when we are tired'; and, especially, that we should, 'if necessary, fall down when faintness overtakes us, to the end that, in the horizontal position, the circulation may be able to restore itself'.

13. *Duckworth and Meldon on Gout.*—Dr. Dyce Duckworth, in the *Brit. Med. Jour.*, March 1881, p. 463, contributes a valuable and instructive paper upon gout considered as a tropho-neurosis, showing, how much this disease depends upon the condition of the nervous system; in the majority of instances, the causes that are at work to produce attacks being those that tend to depress nervous power. Exhaustion of any kind, whether caused by overwork of mind or body, or by excitement, rage, or worry, is provocative of attacks. Colchicum is well known to have a distinct influence in cases of gout, but not in any other arthritic ailment where gout does not take part. Colchicum powerfully affects the nervous system, acting, apparently, on the vaso-motor nerves. Dr. Duckworth advances the proposition that the portion of the nervous system that is specially disposed to the irregular mode of action known as gout, is situated in the medulla oblongata, where, possibly, may be found a trophic centre for the joints. Following Dr. Duckworth's paper is an able article by Dr. Austin Meldon, whose conclusions upon the nature and treatment of gout are thus summarised. 1. The presence of uric acid and soda in the blood is not the sole cause of gout; 2. Want of exercise and animal diet will produce an accumulation of uric acid in the blood; 3. Uric acid and soda must exist in the blood before the disease can be produced; 4. There must be a depression of the nervous system to cause an attack of gout; 5. Depression of the nervous system causes an union between uric acid and soda, forming urate of soda; 6. When an attack of gout has passed away, it does not necessarily follow that uric acid has disappeared from the blood; 7. Uric acid may exist in the blood in considerable quantities, and for any length of time, without causing gout; 8. The use of nerve-tonics, as quinine, strychnia, caffeine, and such like, as well as the inhaling of oxygen and the use of electricity, are of much service in the treatment of the disease.

14. *Drury on High-heeled Boots as causing Backache.*—Dr. C. D. Hill Drury points out, in the *Brit. Med. Jour.*, March 1881, p. 467, how frequently leucorrhœa, with its attendant backache, is entirely due to fashionable heels. He illustrates his assertions by cases which were effectually cured when the heels were cut down. R. NEALE, M.D.

SURGERY.

RECENT PAPERS.

1. NEPVEU, G.—On Neuritis in Stumps. (*Revue de Chirurgie.*)

2. WOLFF.—On Langenbeck's Operation for Hare-lip. (*Archiv für Klin. Chir.*, Band xxv.)

3. VON BERGMANN, E.—On the Treatment of Compound Fracture. (*Aerztl. Intel.-Blatt*, 1880, No. 37.)

4. BILLE.—On Two Cases of Foreign Bodies in the Digestive Tract. (*Berl. Klin. Woch.*, 1880, No. 38.)

5. WEIL, C.—On Removal of a Rhinolith. (*Prager Med. Woch.*, 1880, No. 45.)

6. DRACHMANN.—The Pathogeny of Congenital Dislocation of the Hip. (*Hospitals-Tidende*, series 3, Band vii.)

7. BERGWALL and HESSELGREN.—Two Cases of Gunshot Wound. (*Nord. Med. Arkiv*, Band xiii.)

8. VOSS.—Case of Lipoma of the Rectum with Invagination of the Intestine. (*Norsk Mag. for Lagevidensk*, series 3, Band x; and *Nord. Med. Arkiv*, Band xiii.)

9. MESTERTON.—Removal of a Laminaria Tent from the Female Bladder. (*Upsala Läkaraför. Förhandl.*, Band xv.)

10. NAUMANN.—A Case of Suprapubic Lithotomy. (*Hygiea*, 1880.)

11. TYNG, A. E.—On Double Oöphorectomy for the Cure of Exhausting Metrorrhagia. (*American Jour. of the Med. Sciences*, Jan. 1881.)

12. CORSON, HIRAM.—On the Treatment of Mammary Abscess. (*American Jour. of Obstetrics.*)

13. MOOY.—On the Removal of Plaster-of-Paris Bandages. (*Jour. des Sciences Méd. de Louvain*, p. 93, 1881.)

14. BRAUN.—On the Final Results of Operations for the Radical Cure of Hernia. (*Berl. Klin. Woch.*, Nos. 4, 5.)

15. WOLFE, J. R.—On Plastic Operations, using Large Portions of Skin Removed from Distant Parts. (*Brit. Med. Jour.*, March 1881, p. 426.)

16. DOUGLAS.—On Varix Treated by a Vein-Brooch. (*Lancet*, April 1881, p. 541.)

17. BELLAMY.—On Carotid Aneurism treated by Compression, and the Hypodermic use of Ergotin. (*Lancet*, April 1881, p. 535.)

18. HEATH.—On Colles' Fracture. (*Brit. Med. Jour.*, April 1881, p. 560.)

19. JOWERS.—On Removal of Loose Cartilage from the Knee-joint. (*Brit. Med. Jour.*, April 1881.)

20. BRYANT.—On Gastrotomy. (*Lancet*, April 1881, p. 572.)

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1. *Nepveu on Neuritis in Stumps.*—In an original contribution to the first number of the *Revue de Chirurgie*, Dr. G. Nepveu, of Paris, after a short review of previously recorded cases of neuritis in stumps, relates a case, observed by himself, of ascending neuritis in the leg after amputation of the foot for gangrene from endarteritis. About four months and a half after the operation, the extremity of the stump ulcerated, and the patient, a man aged 44, suffered from severe shooting pains, which reached to the middle of the thigh, from painful contractions of the flexor muscles of the stump, and also from pain and convulsive movements of a similar character in the sound leg. Removal of the painful stump by amputation just below the seat of election was ultimately followed by complete relief, although the stump left at this second operation ulcerated, and was very tender for about four months. On examination of the amputated stump, the posterior tibial nerve was found to be thickened and adherent at its lower extremity to the cicatrix; and the lower portions of the anterior tibial and internal saphenous nerves resembled fibrous cords. The miscroscopic appearances of these nerves even at their proximal extremities indicated a chronic interstitial and parenchymatous neuritis, that is to say, an inflammation affecting both the connective tissue and the nerve-elements. This condition, M. Nepveu states, accounts for the convulsive movement of the stump, its ulceration, and the severe pain felt by the patient. Moreover, it enables us to understand why the sound limb had also been involved in the spasm, and why, after the

second amputation, relief of the pain resulted very slowly and not immediately. Ascending neuritis in a stump affects, it is stated, two very different forms —the simple form and the complicated. Simple ascending neuritis may be accompanied by persistent neuralgia, or by trophic disturbances in the stump. The complicated ascending neuritis presents itself in one or other of two different aspects. Sometimes it attacks the other and sound limb on the side of the stump—ascending neuritis and unilateral myelitis. At other times the myelitis is called transverse, and then the surgeon has to deal with paralysis of the bladder, and paralysis, neuralgia, or contracture of the corresponding limb on the opposite side. The myelitis may be followed by rapid death. M. Nepveu regards his case as one of recovery. Attention is directed to M. Verneuil's practice of resecting nerve-trunks in the flaps during amputation. This resection, it is thought, would probably result in diminishing among those who have submitted to amputation the number of instances of neuritis, whether ascending or localised. In confirmed cases of neuritis of stumps, surgical intervention (re-amputation, neurectomy) has been attended with varying success.

W. Johnson Smith.

2. *Wolff on Langenbeck's Operation for Hare-lip.* —Up to the present time Wolff (*Arch. für Klin. Chir.*, Band xxv, p. 899) has made use of this method as an after-operation in adults, and in cases of incomplete hare-lip. The incision is commenced near the angle of the mouth, and is carried close above the margin of the lip (in this part very thick), it then mounts at the side of the fissure close above its upper limit (the border of the lip here being exceedingly narrow), from which point it is turned angularly downwards, carried along the side of the fissure and onwards almost to the other angle of the mouth. The two halves of the margin of the lip, joined in the centre by an exceedingly narrow bridge, now hang down in the shape of a long strip against the lower lip. The edges of the fissure are now approximated and united by two or three sutures put in from above downwards, and upon the basis thus formed the margin of the lip is modelled. The broad lateral portions are drawn inwards, the narrow central portion being gathered up, and so arranged as to lie exactly in the median line, thus internally to the lower extremity of the closed fissure, which is situated on one side. A small coil-like projection, formed by the narrow bridge of margin of lip connecting the two lateral portions, now touches the lower lip exactly in the middle line. Finally, the margin of lip is sutured throughout to the upper lip in its new connection. Wolff alleges that his method possesses the following advantages: 1. A good symmetrical result, by reason of the normal arrangement of the margin of the lip, and the shifting of the scar to the meeting point of the white skin and red lip-border; 2. A good functional result, the whole circumference of the mouth being provided with closing muscular fibres; 3. Pure operative advantage, since here, as in Nélaton's operation, not a morsel of the border of the lip is removed. The difference between his operation and Nélaton's consists in the more extensive separation and sliding of the margin of the lip, together with the gathering up of the central portion.

3. *Von Bergmann on the Treatment of Compound Fracture.*—In cases of compound fracture in which the skin is perforated at a small spot by a sharp fragment of bone, Bergmann (*Ærtzlich. Intel.-Blatt*, No. 3, 1880) departs from the lines of treatment laid down by Volkmann, and concurred in by most surgeons at the present day, for cases of compound fracture in general. Before the introduction of the antiseptic treatment, these cases were regarded as belonging to a different category from cases of compound fracture in general, the small size of the wound, and the slight degree of crushing of the soft parts, rendering the prognosis a comparatively favourable one. If such cases come under treatment before the occurrence of any reaction in the wound, Bergmann does not dilate the opening, make a digital examination, or any attempt at primary disinfection, but limits himself to scrupulously cleansing the surface of the extremity with soap, brush, razor, and abundance of carbolic lotion. All clots are, as far as practicable, expressed from the small wound under a stream of carbolic lotion, and the wound is covered with carbolised gauze. The entire limb is then enveloped in a layer of salicylic wool; an elastic bandage is applied from below upwards, and the whole covered with a plaster-of-Paris splint. Bergmann reports eight cases, in all of which the result was good, although in four of them the bone projected, and was replaced with difficulty, and in several there was much crushing of soft parts, extravasation of blood, and swelling. Bergmann practices 'primary disinfection' in the sense understood by Volkmann in cases of compound fracture with large gaping wounds, but does not consider a successful result to be by any means relied upon. He refers to cases of amputation necessitated by phlegmonous inflammation starting from the point of fracture, in corroboration of this opinion; since, even if ultimate recovery do occur, these cases cannot be regarded as successful. He has, moreover, had one fatal case from septicæmia. He considers that it is impossible to ensure complete disinfection, and hence, in cases where only a small wound exists, caused by perforation of one of the fragments, he thinks it unwise to lose the advantages of the small wound. In his method of treatment, he lays stress on the elastic pressure, the bolster of wool preventing it from being easily applied too tightly. It hastens wonderfully the absorption of extravasated blood, which readily forms a soil for putrefactive changes. Its most important advantage, however, is the aid it gives to the healing of totally separated bone-splinters. He demonstrates the possibility of this occurrence partly by human specimens, and in part by experiments on animals. At Bergmann's wish, Jakimowitsch has experimented on the femora and tibiæ of dogs, and his results, which will shortly be published, give indubitable proof of this occurrence.

4. *Bille on Two Cases of Foreign Bodies in the Digestive Tract.*—The cases are related by Herr Bille (*Berl. Klin. Woch.*, No. 38, 1880). 1. *Foreign Body in the Stomach: Œsophagotomy and Gastrotomy.* A man, aged 58, who had suffered for many years with a gastric affection, had contrived the following instrument to alleviate his sufferings. To the end of a long German-silver wire were attached a camel's hair-brush, and slightly above the latter, a sponge. This instrument he introduced several times daily into the œsophagus, and cleansed it of troublesome mucus. During one of these operations the stem broke, leaving the lower end lodged in the gullet. Attempts at extraction failing, œsophagotomy was performed, although the patient expressly stated that he could feel the instrument in his belly. All attempts, aided by chloroform-narcosis, to withdraw the wire by the mouth or by the œsophagotomy wound

failing, nothing remained but gastrotomy. This was performed in the following manner. An incision was made in the left nipple-line, two finger-breadths below the border of the ribs, passing obliquely downwards and outwards; a small opening was made in the peritoneum, and the stomach seized and stitched to the external wound. On introduction of the finger, the sponge was found in the neighbourhood of the pylorus, and the wire still lodged in the lower part of the œsophagus. The latter was removed without much trouble, and without the sponge or brush, measured 31.3 centimètres (12½ inches). The patient was fed through the wound; but left-sided peritonitis occurred on the fifth day, and he died. No *post mortem* examination was allowed. 2. *Foreign Body in the Œsophagus: Œsophagotomy*). A chestnut lodged in the gullet of a healthy servant girl, aged 23, but she afterwards ate her supper without difficulty, and passed a good night. Next morning, however, respiration was difficult, and she was unable to swallow a drop of water. The chestnut could be readily felt in the œsophagus, but could neither be extracted with the pharyngeal forceps, nor pushed onwards into the stomach. It was, therefore, removed by œsophagotomy. The operation was followed by very little reaction. The patient was fed fourteen days by the œsophageal tube, and at the end of this period a small fistula only remained, which closed in the course of a few weeks.

5. *Weil on Removal of a Rhinolith and Polypi of the Lower Meatus.*—The patient (*Prager Med. Wochen.*, 1880, No. 45), a scrofulous individual, aged 27, had had polypi removed on two occasions. The formation of the nose was irregular, the right side bulging forwards, the left side being hollowed out like a saddle, while the point deviated towards the left. The right half of the nasal cavity was much encroached upon by bulging of the septum and an elevation of the floor, and completely obstructed by mucous polypi. After removal of the polypi with forceps, the cavity remained impermeable, and, on reintroduction of the forceps, Weil struck upon a hard body, which he fractured in attempting to remove it, so that he extracted only a hemispherical fragment about half the size of a hazel-nut. The patient swallowed the remaining half, but some small fragments were removed on syringing. The total weight of the fragments removed amounted to 2.32 grammes (about 36 grains). The rhinolith was dark brown in colour, of the consistence of mortar; the surface was sooty, and the nucleus consisted of a small piece of cloth. It was chiefly composed of phosphate of lime and an albuminous matter. Fresh polypi grew and were removed a year later, after which the nose appeared clear. G. H. MAKINS.

6. *Drachmann on the Pathogeny of Congenital Dislocation of the Hip.*—In the *Hospitals-Tidende*, series 3, Band vii, Dr. A. G. Drachmann gives an account of seventy-seven cases of congenital dislocation of the hip, which had come under his notice during the preceding fifteen years. Of these, 67 were females and 10 males; the displacement was bilateral in 29, unilateral in 48; the numbers on each side being equal. Of the bilateral dislocations, 28 were in females and 1 in a male. Of the unilateral, 39 were in females, 20 on the right side and 19 on left; and 9 in males, 4 on the right side and 5 on the left. The author discusses the question, whether the dislocation is produced soon after birth; and relates a case which came under his notice in the lying-in hospital in Copenhagen. A primipara, aged 21, with well-marked congenital dislocation of the hip, was naturally delivered of a female child, which died of convulsions on the seventh day after birth. At the necropsy, the left acetabulum was seen to be considerably shallower than normal, and the ring of cartilage was turned outwards at the superior posterior and outer part, forming an inclined plane over which the head of the femur glided upwards and backwards on the ilium. The whole of the left side of the pelvis was atrophied, and the atrophy extended to the head of the femur, which, as well as the head of the bone on the right side, was small, corresponding to the shallow and atrophied acetabulum.

7. *Bergwall and Hesselgren on Gunshot-Wounds.*—Two cases of gunshot-wound are described in abstract in the *Nord. Med. Arkiv*, Band xiii. Dr. Bergwall's case, which was read before the Medical Society at Gefleberg, was that of a man, aged 25, who was wounded by an accidental shot from a Lechancheux's revolver, at the distance of four or five feet. The shot entered near the inner side of the right nipple: no opening of exit was found. When Dr. Bergwall saw him twelve hours afterwards, he had dyspnœa; the percussion-sound in the mammillary line was clear, but in the axillary line dulness commenced, and extended upwards on the back. There was distinct dorsal fremitus. The next day the patient was sent to Gefle, but wandered about for some days in the town instead of entering the hospital, and even then was not very injuriously affected. He merely expectorated some bloody sputa, and recovered in three weeks. The only treatment was the application to the wound of lint dipped in carbolised oil, and a little opium at first. In Dr. Hesselgren's case, which was read at a meeting of a society in Falun, a man, aged 22, had been shot in the back of the neck and had spat out the ball. The remarkable points in the case were, that the projectile, from a small weapon, first penetrated a considerable thickness of clothing, and then had force enough to pass from the region of the vertebra prominens; and that no important parts were injured. The man rapidly recoverd.

8. *Voss on a Case of Lipoma of the Rectum with Invagination of the Intestine.*—The patient, whose case is described by Dr. P. Voss in the *Norsk Mag. for Lägevidensk.*, series 3, Band x, was a married woman, aged 47. She first noticed the tumour as a hard nodule, which projected from the anus when she had a solid evacuation. During the eight days before her admission to hospital, on June 25th, 1879, she had suffered from pain in the stomach and diarrhœa, the evacuations being slimy and fœtid. On examination *per rectum*, a roundish tumour as large as a goose's egg, not tender, was felt; the finger could be passed all round it, and it had a cylindrical pedicle, which was traced upwards, somewhat to the right and forwards, but the point of attachment could not be reached. After the injection of some water, there were loose evacuations; the tumour now receded, and could no longer be felt; a somewhat resistant mass, however, could be felt in the left iliac fossa, but slipped away under the fingers. The patient was discharged, but was readmitted on July 9th with a ligature tied around the pedicle of the tumour, which could now be easily drawn out through the anus. The lower part was firm, nodulated, and greyish black; the upper half was covered with a smooth mucous membrane. On July 14th, an incision was made in the mucous membrane in the equator of the tumour, which was turned out, and the small pedicle tied and cut; there was but little hæmorrhage. Corresponding to the base of the tumour

was a round smooth opening, which admitted the finger; it was situated at the apex of a cone hanging free in the rectum, around which an œsophageal sound could be passed in all directions for a considerable distance. Apparently, the tumour (which was an ordinary lobed fibroma) had been adherent to the wall of the sigmoid flexure, and had invaginated this part into the rectum. With the aid of repeated injections of water, the invaginated portion of intestine was replaced, and the patient left the hospital cured on July 30. In commenting on this case, the author refers to two of a similar nature; one recorded by C. Holst in 1863, and another described by Dr. Coupland in the *Brit. Med. Jour.* for June 7th, 1879.

9. *Mesterton on Removal of a Laminaria Tent from the Female Bladder.*—Dr. E. B. Mesterton relates, in the *Upsala Läkarajörenings Förhandl.*, Band xv, the case of a woman, aged 34, the subject of stricture and painful micturition, whose urethra was first dilated by bougies, after which a laminaria tent was introduced. When the patient attempted to remove it, the string to which it was fastened broke, and it passed into the bladder. After an ineffectual attempt to remove the foreign body, she was sent to Upsala. Two incisions, each two lines deep, were made in the urethra, parallel with the rami of the pubic bone. All attempts at extraction with the forceps failed, partly because the bladder could not be sufficiently opened, partly because the mucous membrane got between them. At last, the tent was removed by a Sims's uterine hook, guided by the finger. The patient's life was endangered for six days by an attack of nephritis, but she finally recovered.

10. *Naumann on a Case of Suprapubic Lithotomy.*—G. Naumann describes in *Hygiea* for 1880 (*Nordiskt Medicin. Arkiv*, Band xii) the case of a man, aged 24, who had suffered for several years from symptoms of stone in the bladder, which was, however, not detected, until his admission into the hospital at Helsingfors on account of severe vesical catarrh: he was much emaciated, and very miserable. On examination with a Thompson's lithotrite, a stone was discovered, fixed at the posterior part of the bladder, and so large that the male blade of the instrument had to be pushed far beyond the scale in order to seize the stone. The only feasible plan of removal appeared to be the high operation. This was done under carbolic spray: no antiseptic was injected into the bladder. The calculus, which was as large as a goose's egg, and lay in a pouch at the back part of the bladder, consisted of phosphates, and broke asunder when it was seized; it had, therefore, to be removed piecemeal, which was a very troublesome process. The bladder was washed out with a solution of boracic acid, and the wound was united, a drainage-tube being left in it. Lister's dressing was applied, and a *cathetre à demeure* was introduced. This soon became plugged with the detritus of the calculus, and was cleaned; but, the next morning, the urine was found to have escaped through the drainage-tube and saturated the dressings the catheter being again obstructed. The patient became worse, and died in the evening. The necropsy showed extensive urinary infiltration, and pericystitis.

A. Henry, M.D.

11. *Tyng on Double Oöphorectomy for Exhausting Menorrhagia.*—Dr. A. E. Tyng reports (*Amer. Jour. of the Med. Sciences*, Jan. 1881) a case in which Battey's operation was performed upon a patient, aged 40, for the relief of exhausting menorrhagia, the patient's family having a tendency to bleeding. Antiseptic precautions were observed, and both ovaries were removed. The right was healthy; the left contained two small cysts (Graafian follicles?) At the end of three weeks the patient was sitting up and made a good recovery, followed by entire relief and great improvement in the general health.

12. *Corson on the Treatment of Mammary Abscess.*—In the last number of the *Amer. Jour. of Obstet.*, Dr. Hiram Corson of Conshohocken, Pennsylvania, after alluding to the usual routine of cloths steeped in hot vinegar, plasters, and poultices, states that for the past twenty-seven years he has used no other remedy but cold applications. His method is to partly fill a bladder with cold water having ice in it, and apply to the inflamed part. This application of ice-water affords almost immediate relief, and, if suppuration have not taken place, will always prevent it. Indeed, in cases which have already 'suppurated, been poulticed and broke', or been lanced, this method is 'just as applicable, efficient, and safe'. He gives striking illustrative cases.

13. *Mooy on the Removal of Plaster-of-Paris Bandages.*—Dr. Mooy, of Holland (*Jour. des Sciences Méd. de Louvain*, 1881, p. 93), recommends that, before the application of the plaster bandages, a band of flannel should be laid up and down the limb at the point where the plaster bandage is to be divided. This is to be doubled, and saturated with unboiled linseed-oil, to which has been added five per cent. of carbolic acid. At the end of a few hours the bandage is found to be impregnated with oil, as is testified by the yellow colour which it assumes along the course of the flannel band. Dr. Mooy adds that the flannel band is not absolutely requisite, since the same object may be gained by oiling the plaster bandage from the outside, either after it has dried, or while it is being put on.

14. *Braun on the Final Results of Operations for the Radical Cure of Hernia.*—The author communicates (*Berl. Klin. Woch.*, Nos. 4, 5) the results of nineteen such operations performed by Professor Czerny on sixteen patients. The indications for radical operation were: 1, strangulation; 2, impossibility of keeping up the hernia with a truss; 3, adhesion of the hernia, preventing its return; and 4, fæcal fistula in the hernial sac. One case died from pyæmia; another from convulsions independent of the operation. Ligature of the neck of the sac and suture of the hernial aperture was done in nine inguinal herniæ, and in two omental herniæ in the linea alba. Six inguinal herniæ in adults recurred, but remained small and could be kept up with a truss. One child had remained cured for three years. Partial constriction of the sac with suture of the hernial aperture was done in two children, and in both cases the hernia returned. The hernial aperture alone was closed in two adults and two children. In both adults the hernia recurred, and also another inguinal hernia appeared on the other side. The children remained cured nineteen and thirty-four months. The neck of the sac alone was ligatured in an adult, and a small local recurrence took place.

James Anderson, M.D.

15. *Wolfe on Plastic Operations, using Large Portions of Skin Removed from Distant Parts.*—Dr. J. R. Wolfe (in the *Brit. Med. Jour.*, March 1881, p. 426) reports another case equally successful with the one recorded in the *Journal*, September 1875, in which a piece of skin, measuring three to four square

inches, was removed from the forearm and applied to the face to replace the lower eyelid, which had been destroyed by a burn. The result was quite successful, as is shown by plates of the case before and after the operation. Dr. Wolfe thus describes the most important steps in the operation. 'Having taken a shape with a piece of lint of the flap required, I carefully dissected a piece of skin from the forearm, cutting it larger than the necessary shape all round, so as to allow for shrinking; I then turned up its deep surface, and, with a pair of flat sharp scissors, pared off every vestige of subcutaneous tissue, so as to leave a white appearance. It was then applied to the gap in the eyelid, to which it was united by fine silk sutures. After pressing and moulding it into its new place, lint, soaked in hot water, was applied to its surface for about ten minutes. It was finally dressed with lint wrung out of hot water; over this four folds of dry lint were placed, and the whole covered with fine gutta-percha tissue, and secured by an immovable bandage.' On the third day, the flap looked no longer white, but was of a natural appearance, bluish lines being visible here and there.

16. *Douglas on Varix Treated by a Vein-Brooch.*—Mr. J. R. A. Douglas, in the *Lancet*, April 1881, p. 541, describes a brooch or safety-pin, the needle of which is passed under the vein, giving very little pain, and fastened to the parts outside like a brooch-pin. The plan is simple and efficacious.

17. *Bellamy on Carotid Aneurism Treated by Compression and the Hypodermic use of Ergotin.*—Mr. Edward Bellamy, in the *Lancet*, April 1881, p. 535, gives the notes of a case of carotid aneurism occurring in a woman, aged 64, in which he injected two grains of ergotin over the tumour the day before commencing digital compression, which latter was continued at intervals for the space of forty-one hours in all, causing nearly total obliteration of the tumour; a result which, Mr. Bellamy believes, would have really occurred had the patient been willing to submit to a slightly prolonged treatment. [An abstract of Professor Langenbeck's paper, who first brought forward the use of ergotin subcutaneously as a remedy in aneurism, may be cousulted in the *Med. Times and Gaz.*, April 1869, p. 443. Mr. Holmes (*Lancet*, June 1872, p. 786) speaks very doubtfully of its value; while Dr. Greenhow, in his address to the Clinical Society (*Med. Times and Gaz.*, Feb. 1880, p. 123), said that the idea was absurd.—*Rep.*]

18. *Heath on Colles' Fracture treated by a New Splint.*—Mr. Christopher Heath reports, in the *Brit. Med. Jour.*, April 1881, p. 560, four cases of Colles' fracture most successfully treated by a splint, the invention of Dr. Carr, an American surgeon. (It is made by Krohne and Sesemann. A detailed description, with diagram, is given. The advantages claimed for this splint are, that it relieves the patient of much discomfort and disability, allowing him to use his fingers and thumb, and thus, by the excellent position obtained, preventing the stiffness frequently occurring after this fracture. In each case the splint was removed at the end of the month, and in one only was there any deformity, while in all, the fingers and wrist were perfectly movable.

19. *Jowers on Removal of Loose Cartilage from the Knee-joint.*—In the *Brit. Med. Jour.*, April 1881, four cases under the care of Mr. Jowers, in the Sussex County Hospital, are reported by Dr. Uhthoff, in which loose cartilages were successfully removed under antiseptic means. The patients in three cases made a rapid recovery; the fourth case was more prolonged, the patient being phthisical, and no foreign body being capable of detection after the joint was opened, although it appeared clearly definable previously to operation.

20. *Bryant on Gastrostomy.*—In the *Lancet*, April 1881, p. 572, Mr. Thomas Bryant reports two cases in which this operation was successfully performed. In a girl, aged 22, with cicatrical stricture of the œsophagus, the operation was performed in July 1880, and the patient is thriving at the present hour. The other, a labourer, aged 64, lived two months, and died from the spread of the malignant disease to the trachea and other parts. The success of the operation depended upon the method adopted, which was as follows. The skin and muscles were consecutively divided by an oblique incision three inches long below the margin of the left ribs, down to the peritoneum, under carbolic spray. All bleeding vessels were secured before the peritoneum was opened. The stomach was easily found and brought well forward to the surface. Two loops of fine carbolised silk were then introduced through the peritoneal covering of the stomach, about a third of an inch apart, the loops being left long. Sutures were next carefully passed through the peritoneal surface of the stomach, securing this organ to the skin only. During the next five days the patient was fed by nutritive enemata, and on the sixth day the stomach was opened by a very small incision, not more than an eighth of an inch long. This was made by raising the two loops and cutting, with a narrow tenotomy knife, from loop to loop. An India-rubber tube, with its end cut obliquely, was then introduced, and milk poured through it by means of a funnel. After a time, by a modified Higginson's syringe, the patients could feed themselves. Mr. Bryant gives Mr. Howse, his colleague, credit for suggesting this mode of operation.

R. NEALE, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. BARNES, R.—On Missed Labour. (*Trans. Obstetric Society of London*, March 1881.)

2. BASTIAN.—Chorea During Pregnancy. (*Brit. Med. Jour.*, April 30th, 1881.)

3. BUCKLER, T. H.—Strangulated Veins of the Uterus. (Cambridge, U.S.A., 1881.)

4. COURTY. — Peri-uterine Adenitis. (*Annales de Gynécol.*, April 1881.)

5. FROMMEL.—On the Treatment of Carcinoma of the Cervix Uteri complicating Pregnancy. (*Zeitschr. für Geburtsh. und Gynäk.*, Band v, Heft 2, p. 158.)

6. GOTH.—On the Influence of Malarial Infection on Pregnancy, Labour, and Childbed. (*Ibid.*, Band vi, p. 17.)

7. HICKINBOTHAM, J.—On Missed Labour.

8. KISCH, E. H.—Uterine Diseases Resulting from Hydropathy (Badecur). (*Prager Med. Woch.*, No. 4, 1881.)

9. LEVIS.—Contribution to the Statistics of Porro's Operation. (*Central. für Gynäk.*, April 30th, 1881.)

10. LYON, J. G.—Removable Axis-Traction Rods for Midwifery Forceps. (*Brit. Med. Jour.*, March 19th, 1881.)

11. QUEIREL.—Varices during Gestation and Labour. (*Annales de Gynécol.*, April 1881.)

12. RUNGE, M.—A Case of Genital Fissure with Ectopia of the Intestines. (*Cent. für Gynäk.*, April 30th 1881.)

13. SAVAGE, T.—A Series of Twenty-six Cases of Oöphorectomy.

14. Thorburn.—On Metria and on the Dual Clinical Characteristics of Metrial Blood-Poisoning.

15. Trier, M.—Cæsarean Section *Post Mortem*, with Living Child. (*Cent. für Gynäk.*, April 30th, 1881.)

16. Sandberg.—A Case of Premature Labour: Use of Pilocarpin. (*Norsk Mag. for Lögevidensk*, series 3, Band x.)

17. Pippingsköld. — Ovariotomy and Pregnancy. (*Finska Läkaresällsk. Handl*, Band xxii.)

18. Wettergren.—Cystic Polypous Fibroma of the Uterus in a Woman aged 79. (*Hygiea*, 1880.)

19. Salin.—*Post Mortem* Appearances two years after Ovariotomy. (*Hygeia*, 1879.)

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1. *Barnes on Missed Labour.*—Dr. Barnes read a paper on missed labour. He stated that no authentic example of missed labour was yet known, the term being taken to mean the prolonged retention *in utero* of a fœtus living at term. He related a case which came under his own care. A lady, aged 39, who had borne three still-born children, the last of them five years before, consulted Dr. Veitch of Penang in December 1872. Pregnancy dated from early in the preceding November. The usual signs of pregnancy were manifested. She verified quickening; up to the seventh month she felt the movements of the child. About the eighth month after a slight accident a flow of blood came. Eleven months after the presumed date of conception, she came to England. She came under Dr. Barnes' care in December 1873. Under chloroform, the cervix having been dilated by laminaria tents, he felt what he took to be the interior surface of the uterus; the sound passed six inches. In January 1874, some coloured discharge went on. Pieces of fœtal bone, which turned out to be bits of spinal column, passed by the vagina. After dilatation by tents, more bones were removed by the fingers and forceps. In February this manœuvre was repeated, and by craniotomy-forceps the remaining parts of a fœtus, which appeared to have reached the eighth or ninth month of gestation, were extracted. Her health then improved, the discharge became less offensive, and the uterus gradually shrank, as in ordinary involution, but more slowly, until it reached the common conditions of the non-pregnant state, and the patient perfectly recovered. Dr. Barnes regarded this as a clear instance of the retention of a fœtus, dying *in utero* at a viable age, for some months after the normal term of gestation had been reached. In this sense the term 'missed labour' might be applied to it.

2. *Bastian on a Case of Chorea during Pregnancy.*—Margaret T., aged 24, was admitted into University College Hospital, September 16th, 1880, with chorea. Her sister had the same complaint about eight years ago, and, a short time afterwards, M. T. was affected for the first time. She had no relapse, except one slight one soon after her first attack, until about the fifth month of her pregnancy; that is, she was free for a period of nearly eight years. On admission, the choreic movements were not very marked, but were more pronounced on the right side. There was distinct weakness on the right side. The eyeballs and facial muscles were distinctly involved. The mental condition was obtuse and dull. The first sound of the heart was almost entirely replaced by a harsh blowing murmur of no great duration. The movements increased daily in violence. She was ordered chloral and bromide of potassium, of each 10 grains, every four hours. During the early part of the night she was very violent; at times she subsided into quiet and tears, quickly succeeded by wild excitement approaching mania. After remaining two days in this condition she became quieter and slept.—September 25th. She was worse, got out of bed, fell and bruised herself severely. An extemporised padded room was made in the corner of the room with mattresses, and, after a sleepless night—during which she made many efforts to escape—she grew quieter.—October 1st. Owing to feeble pulse and cold extremities, she was ordered 7 minims of tincture of digitalis instead of the chloral. During the next fortnight, the choreic movements gradually grew less violent, but her mental condition deteriorated. When spoken to, her face assumed an expression of great obstinacy, and she either refused to speak at all, or made use of oaths and filthy expressions. When left undisturbed she wept, as a rule quietly, but uttered an occasional cry.—October 18th. She was put in a private ward, kept under constant supervision, and ordered 7 minims of tincture of opium every six hours. About a week after this date she began to improve. At the beginning of November, at which time she was in the early part of the seventh month of her pregnancy, she had become quite quiet and tractable, took interest in all that went on about her, was able to sew, and help in the work of the ward. Her temperature was never above the normal standard; it was mostly below, ranging between 97 deg. and 98.2 deg. She continued to take the opium, but at longer intervals (eight hours), and was discharged on November 9th, apparently in her normal condition. After this, she came for some time as an outpatient, the opium being gradually reduced, and finally stopped.—February 11th, 1881. She wrote a legible and cheerful-toned letter, stating that she had been confined on February 1st, and was doing well, but that the child, a boy, was 'a weak little thing'. Dr. Bastian remarks that the case possesses several points of interest. A severe attack of chorea had occurred in this patient at the age of sixteen, very shortly after one of her sisters had suffered from the same illness. The disease recurred at the commencement of the fifth month of her pregnancy, when its outbreak may have been favoured, both by an altered blood condition, as well as by that augmented irritability of the nerve centres which is apt to be excited in a reflex manner during the first pregnancies, especially in neurotic patients. That chorea is at times associated with delirium, is well known. In this case, a semi-maniacal condition existed for several days, followed by a weak and very disordered action of the heart. Shortly afterwards, a well-marked attack of acute melancholia set in. This state lasted between two and three weeks. Opium, which had been at first withheld on account of the pregnancy, was, after a few days, given carefully in small doses. Under its influence she improved and recovered. The opium was continued to guard against a relapse, and then very gradually discontinued. The appearance of mania or melancholia during the middle of pregnancy is an extremely rare event; but, in this case, its etiology was, in all probability, very intimately connected with those structural and functional changes in the cerebral hemispheres which lay at the root of the semi-maniacal attacks, complicating the originally simple chorea. Dr. Bastian believes it is extremely rare for a person who becomes the subject of mania or melancholia during pregnancy to recover from such a condition

previous to the birth of the child. In this case, the melancholia disappeared about the beginning of the seventh month; and, at the expiration of her term, the patient was safely confined of a living, though probably puny child. [In connection with the above case, it may be interesting to state that, in a case of chorea during pregnancy, seen by Dr. R. Barnes, the patient aborted at the seventh month, went mad, and died some months later.—*Rep.*]

7. *Hickinbotham on Missed Labour.*—Dr. Hickinbotham, in an able paper, relates the following case. L. W., aged 37, had had eleven children, all of whom had been delivered instrumentally, the last seven by craniotomy. She was the subject of malacosteon. In April 1879, menstruation ceased, and the usual signs of pregnancy appeared. At the end of the fifth month she felt ill, but had no discharge; after which she grew no bigger. She never 'saw anything' until the end of July 1880, when, after a hard day's work, she had a 'bursting feeling', and two little black clots came away, but there was no other discharge of blood. The cervix was dilated by sponge-tents, and a flattened and half disintegrated fœtus extracted. There was no trace of placenta. A scanty discharge, having a normal lochial odour, lasted a few days. In three weeks the uterine cavity was reduced to its normal size, and the patient slowly recovered. Dr. Hickinbotham thinks there is little doubt that this fœtus died at the time alluded to, and was afterwards retained in the uterus.

8. *Kisch on Uterine Diseases from Hydropathy.*—Dr. Kisch has seen 25 cases of acute parametritis, 16 cases of severe metrorrhagia, and other uterine disorders, in patients who have been subjected to a 'Cur'. In some cases, the administration of rough vaginal douches had set up pelvic peritonitis. In other cases, the carbonic acid baths had been used during menstruation, with the result of 'circumscribed pelvic peritonitis'. Severe metrorrhagia ensued after the use of the vapour baths, by climacteric corpulent women; it also resulted, after the use of the vapour baths, by patients suffering from uterine myomata. It is not surprising to find that, in four cases, the general pelvic peritonitis thus set up was of a severe nature, and ran a long, tedious course. The author concludes that the mud-baths, prolonged carbonic acid baths, vapour-baths, and the like, are contra-indicated during pregnancy.

9. *Richardson on Porro's Operation.*—In the report of a case of Porro's operation, by Dr. Richardson, in the March number of the LONDON MEDICAL RECORD, It should have been stated that the pedicle was ligated *in situ*, the uterus drawn through the wound, and then incised, thus preventing the escape of any blood into the abdominal cavity.

13. *Savage on Oöphorectomy.*—Dr. Savage considers the justifiability of performing oöphorectomy, in certain cases, to be now thoroughly established. In the 26 cases in which he has performed it, 7 were for prolapsed ovary, 5 for enlarged (cystic) ovary, 4 for myoma, 3 for ovarian dysmenorrhœa, 3 for malformation, 2 for shrivelled ovary (cirrhosis?) 2 for epilepsy. In all these cases the patients recovered. It has been considered a *sine quâ non*, for the benefits to be derived from it, that both ovaries should be removed; and in 25 cases, Dr. Savage removed both ovaries. In the one exception, Dr. Savage failed to remove the second ovary on account of adhesions. Dr. Savage states, that in some cases the removal of one ovary is sufficient where the disease is strictly limited to one side. All the operations were performed by a median abdominal section, and under strict antiseptic precautions. In two cases, however, the spray broke down. Dr. Savage removes the Fallopian tube or not, just as it happens to be convenient in the application of the ligature. The chief danger is from the slipping of the ligature, and this is especially the case where the tube or broad ligament is tense, so that the pedicle is short, and with difficulty brought to the surface for the application of the ligature; and the same applies where the abdominal wall is thick with fat, or the recti are unyielding. When this occurs, viz., that the pedicle is put on the stretch, it is easy to conceive that it may, on receding to its normal state of relaxation, gradually, in a few hours, draw on a portion of the distal end, and cause the ligature to loosen a little, especially as, in the condition supposed, the distal end of the pedicle is short, there not having been much room to cut between the ovary and the ligature. In most cases, Dr. Savage used the ordinary transfixion double ligature, taking the precaution to pass the ligature of one half section a second time round the whole. In nearly all the cases, there was a slight metrostaxis after the operation; but this usually ceased in a few days, to be followed by a complete and final cessation. The large majority ceased to menstruate after the operation; in one or two, menstruation recurred once or twice. Dr. Savage thinks there can be no doubt of the benefit to be derived from oöphorectomy, in the case of a bleeding and growing myoma of the uterus, where means adopted for relief have hitherto failed, and the patient is gradually, though surely, losing ground, with a prospect of a not far distant death staring her in the face, *i.e.*, if the operation is done before the menopause. By taking away the ovarian influence, menstruation is removed, and the activity of growth in the tumour thereby diminished. But more than this is done, for in many cases the tumour actually diminishes to a considerable extent; and, Dr. Savage believes, has in some cases been known to entirely disappear. Dr. Savage alludes to the hysterical element in many of the cases, and quotes Hegar's case, in which the patient was not relieved after the operation of 'sham castration' (LONDON MEDICAL RECORD, Feb. 1881). Deformities of the pelvis, and some congenital malformations, are among the conditions that will in future call for oöphorectomy. He concludes an interesting and instructive paper, by quoting Dr. Goodell, who says, 'The operation of spaying is yet in its infancy, and time is needed to develop its resources. But I cannot help feeling that in properly selected cases, it will prove the sole means of curing many mental and physical disorders of menstrual life, which have hitherto baffled our science, and are a standing opprobrium to our profession.'

15. *Trier on a case of Post Mortem Cæsarean Section.*—Dr. Trier relates the case of a woman, aged 39, who had contracted syphilis from her husband, and become pregnant about a year later. She was taken into the hospital at about her sixth month of pregnancy, with cerebral symptoms and right hemiparesis. The usual syphilitic remedies were administered, but failed, and the patient died two months later. The Cæsarean section was performed two minutes after death. The child was delivered deeply asphyxiated, and was only revived after three quarters of an hour had been spent in producing artificial respiration. It weighed 2,150 grammes (about 4¾ lbs.) The child survived one month.

FANCOURT BARNES, M.D.

16. *Sandberg on a Case of Premature Labour: Use of Pilocarpin.*—I. Sandberg relates in the *Norsk Mag. for Lägevidens*, series 3, Band x, a case of acute hydramnios after over-exertion in a multipara, aged 40, at about the thirty-sixth week of pregnancy. There were much tenesmus and dyspnœa; and, as the fœtus was apparently dead, an endeavour was made to induce premature labour by the injection of pilocarpin in doses of two centigrammes (about one-third of a grain) at intervals of half an hour; but no pains of importance were produced at the end of four hours, and, the woman being in a very weakened condition, the labour was terminated by artificial means. Two children were born: one was dead, the other lived a day and a half. The mother was able to get up on the tenth day.

17. *Pippingsköld on Ovariotomy and Pregnancy.*—The following three cases are related by Dr. J. Pippingsköld in the *Finska Läkaresällsk. Handlingar*, Band xxii.—Case I. A. L. M., aged 41, menstruated first at the age of 15, and was married at 18. She had had ten labours, the last two and a half years since. A tumour was first observed in March 1877; the menses had become irregular, and ceased in July 1878. She was admitted to hospital at the end of January 1879. Three days later, twelve and a half litres of ropy colloid material were removed by tapping. On the last day of February, dyspnœa had increased, and pains resembling those of labour had set in; she was now again tapped, but only 2⅔ litres of watery fluid escaped. As she had severe orthopnœa, and became worse during the next two days, ovariotomy was performed. As soon as a large portion of the contents of the cyst had been removed, she was found to be pregnant: the possibility of this had been borne in mind before the operation. The pedicle was cauterised, and secured by eleven ligatures. Immediately after the operation, the labour-pains, which had probably commenced during the previous night, became more powerful; seven hours later, the liquor amnii escaped, and a dead child was soon afterwards born. Dr. Pippingsköld attributes the death of the fœtus to extravasation into the placenta, and believes that it might have been born alive if the operation had been performed fourteen days earlier.—Case II. L. S., aged 34, married six years, had two living children (the youngest 3 years old), had miscarried at the sixth month with twins two years before her admission to hospital in July 1877. The catamenia, which had been normal, had disappeared three months previously. The abdomen had gradually enlarged after the miscarriage. The diagnosis of an ovarian cystic tumour on the left side was made. Ovariotomy was performed on July 27; on the eleventh day the patient left her bed, and returned home a few weeks afterwards. She was delivered of a fine girl on November 3.—Case III. In the beginning of April 1878, Mrs. A. was sent to Dr. Pippingsköld by another medical practitioner, who had diagnosed an ovarian cyst in combination with ascites. The patient was 24 years of age; she had been married three and a half years, and had had two children, the youngest being 1½ years old. After her last confinement, her abdomen began to enlarge, and was, when Dr. Pippingsköld first saw her, greatly distended; she had also prolapse of the uterus. A preliminary tapping was performed; after which an abdominal bandage was applied for twelve weeks, with a glycerine tampon, compress, and T-bandage to the uterus. On June 23, ovariotomy was performed; the cyst was found to be connected with the right ovary. On the left ovary were three small cysts with clear serous contents, which were opened and cauterised. The patient was kept in bed five weeks, during which a glycerine tampon was daily introduced into the vagina. She menstruated normally in July. After she had left her bed, the uterus was found to be in its normal position, and remained so. On October 28th, 1879, she was delivered of a child weighing more than 10½ lbs., and made a good recovery.

18. *Wettergren on Cystic Polypous Fibroma of the Uterus in a Woman aged 79.*—A woman, whose case is related by Dr. Wettergren in *Hygeia* for 1880, had in 1844 extremely profuse and obstinate hæmorrhage, which confined her to bed for half a year. In 1877, the hæmorrhage returned; and in 1878 became extremely abundant. Examination detected, at the posterior part of the vaginal portion of the uterus, an oval pedunculated tumour nearly as large as a hen's egg, with fluid contents. A similar tumour, smaller in size, was found attached anteriorly. Removal was effected by the écraseur. On examination, the tumours were found to consist nearly entirely of irregular cavities with thin walls. Their capsule was only a few millimètres thick. The cavities were lined with a cylindrical epithelium. The walls were formed of connective tissue more or less rich in cells. Dr. Wettergren considers the case remarkable on account of the cystic structure and the long existence—apparently thirty-five years—of the polypi, as well as the great age of the patient.

19. *Salin on the Post Mortem Appearances two Years after Ovariotomy.*—The case, of which the *post mortem* appearances are described by Herr M. Salin in *Hygeia* for 1879, was one of removal of the left ovary, in which the pedicle, which was long and narrow, was tied in two parts with a moderately fine silk ligature and dropped into the abdomen. The right ovary was changed into a cyst as large as a hen's egg, but was left untouched. The operation was followed by exudation into the pelvis, which was absorbed at the end of five weeks. Nearly two years after the operation, the patient died of cancer affecting the chest. Numerous adhesions were found around the right ovary (which was quite shrivelled up) between the uterus and the rectum and sigmoid flexure. The left lateral ligament presented the ordinary appearance. Its upper border was thin and even, somewhat thicker near the uterus, from the Eustachian tube being there. In this border were two hard nodules as large as hemp-seeds, each of which contained a silk ligature embedded in a thin layer of connective tissue.

A. Henry, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

1. Holwede and Münnich.—On an Endemic Outbreak of Croupous Pneumonia. (*Archiv für Kinderheil.*, vol. ii, parts 1 and 2.)

2. Monti.—On the Artificial Feeding of Sucklings. (*Ibid.*)

3. Englisch.—On Congenital Narrowing and Closure of the Male Urethra. (*Ibid.*, part 3.)

4. Förster.—Cases of Acquired Paralysis in Children, with Observations. (*Jahr. für Kinder.*, vol. xv, part 4.)

5. Kormann.—On the Artificial Feeding of Children in the First Ten Weeks of Life, and the Substitution of Cow's for Mother's Milk. (*Ibid.*)

6. Roger and Damaschino.—Changes in the Spinal

Cord in Infantile Paralysis and Progressive Muscular Atrophy. (*Revue de Méd.*, Feb. 1881.)

7. PARROT.—Aphthous Vulvitis and Gangrene of the Vulva in Children. (*Ibid.*, March.)

8. OWEN.—On Maxillary Abscess and Necrosis in Childhood. (Association of Surgeons Practising Dental Surgery, Dec. 15, 1880.)

9. FINNY.—The Croton-Oil Treatment of Tinea Tonsurans. (*Brit. Med. Jour.*, Feb. 26.)

10. OSBORN.—Phimosis as a Cause of Hernia in Infants. (*Ibid.*, March 19.)

11. WARNER.—Recurrent Headaches in Children. (*Brain*, part xi.)

12. JACOBI.—Anæmia in Infancy and Early Childhood. (*Archives of Med.*, New York, Feb. 1881.)

13. GEE.—Clinical Lecture on Tubercular Peritonitis in Children. (*Lancet*, Jan. 1.)

14. PORCHER.—Gastric Remittent Fever of Infants and Young Persons. (*Amer. Jour. of the Med. Sciences*, Jan. 1881.)

15. GIBNEY.—Perityphlitis in Children: Report of Six Cases. (*Dublin Jour. of Med. Science*, Jan. 1881.)

16. WHEELER.—On the Operative Treatment of Hare-lip. (*Ibid.*)

CASES OF CHILDREN'S DISEASES IN HOSPITALS.

Two cases of Extensive Fracture of Frontal Bone: aged 3 years and 10 years: Recovery. Mr. Behrendt and Mr. C. E. Hobbs. (*Brit. Med. Jour.*, Jan. 1.)

Malignant Small-Pox: aged 4 years: Fatal in thirty-six hours. Dr. Collie. (*Ibid.*, Jan. 29.)

Deformity arising from Overgrowth of the Ulna: aged 12 years. Mr. W. Pye, Victoria Hospital for Children. (*Ibid.*, March 5.)

Telangiectasis in a girl, aged 8 years: Occupying entire Right Cheek, and protruding into Mouth: Treatment by Cautery. Mr. Gay, Great Northern Hospital. (*Lancet*, Jan. 22.)

Traumatic Tetanus: Boy, aged 11 years: Treated with Calabar Bean: One-sixtieth of a grain in Gelatine Lamels every four hours for several days: Recovery. Mr. C. C. Burman. (*Ibid.*, Jan. 29.)

Four cases of Congenital Syphilis: Illustration of Splenic Enlargement and Chronic Laryngitis. Dr. F. Warner, East London Hospital for Children. (*Ibid.*)

Cases of Optic Neuritis and Neuro-retinitis in Children. Mr. Hulke, Royal London Opthalmic Hospital. (*Ibid.*, Feb. 5.)

Compound Depressed Fracture of Skull: Boy, aged 11 years: Trephining: Death. Mr. Berry, Royal Albert Edward Infirmary, Wigan. (*Ibid.*)

Three cases of Abscess of Knee-joint in Children. Mr. E. Owen, St. Mary's Hospital. (*Ibid.*, Feb. 12.)

Case of Strangulated Congenital Umbilical Hernia. Mr. Treves, London Hospital. (*Ibid.*, Feb. 26.)

Cases of Tinea Tonsurans, accompanied by Alopecia Areata. Dr. Stowers. (*Ibid.*)

Fatal case of Suppressed Hæmorrhagic Variola, complicated with Renal Colic: Girl, aged 10 years. Mr. Sweeting, Fulham Workhouse. (*Ibid.*)

Case of Vescical Calculus: Lateral Operation: Abscess opening through Umbilicus: Recovery: Boy, aged 5 years. Mr. Bryant, Guy's Hospital. (*Ibid.*)

Pulsating Bronchocele in a boy, aged 10 years. Dr. Downes, Kashmir Hospital. (*Ibid.*, March 19.)

Acute Articular Rheumatism: aged 9 months: induced by cold: no hereditary predisposition, no heart affection. Dr. Garden, Aberdeen Hospital for Sick Children. (*Practitioner*, March 1881.)

Infantile Paralysis: Girl, aged 5 years: Treatment by Galvanisation: Perfect recovery. Dr. Finlay, Middlesex Hospital. (*Med. Times and Gaz.*, Jan. 8.)

A Series of Tumours in Young Children. Mr. Parker, East London Hospital for Children. (*Ibid.*, Jan. 15.)

Case of Noma of the Ear successfully treated by Cauterisation: Girl, aged 4 years. Mr. Hutchinson, London Hospital. (*Ibid.*, Jan. 22.)

A Fatal Case of Ileo-cæcal Intussusception in an Infant, aged four months. Dr. Bury. (*Ibid.*, Feb. 19.)

Cases illustrating some of the Special Groups of Muscles that may be particularly affected with Chorea. Dr. F. Warner, London Hospital. (*Ibid*, March 5.)

Case of Meningocele. Mr. Anderson, Edinburgh Royal Infirmary. (*Edinburgh Med. Jour.*, March 1881.)

Paralysis of both Spinal Accessory Nerves in boy aged 8 years, following a fall on head: total loss of power of swallowing: diaphragmatic respiration: partial paralysis of arms, legs, neck: sensation unaffected: pain in back and neck: ultimate recovery. Dr. Foot, Meath Hospital. (*Dub. Jour. of Med. Science*, March 1881.)

CASES AND SPECIMENS OF CHILDREN'S DISEASES EXHIBITED AT SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.—Jan. 4, Obstruction of Superior Mesenteric Artery and Vein, the former by a mass of semicartilaginous, semifibrous tissue, and the latter by a thrombus, both being caught in a fold of the mesentery on itself: aged 5 years. Dr. F. Taylor.—Jan. 18, Abscess of liver following dysentery: aged 3½ years. Dr. Norman Moore.—Cirrhosis of liver: aged 10 years: no history of drinking: tapped twice: no tubercle.—Feb. 7, Rupture of descending part of arch of aorta: girl, aged 12 years: after being trampled on by a pony. Mr. McCarthy.—Feb. 15, Congenital truncation of forearm. Mr. Barwell.—March 3, Congenital unilateral hypertrophy of head and face. Mr. Barwell.—Congenital ichthyosis. Mr. Startin.

PATHOLOGICAL SOCIETY OF DUBLIN.—Jan. 15, Pyelonephritis from chronic obstruction of urethra: boy, aged 15 years: congenital phimosis: urethral stricture. Dr. Foot.—Feb. 19, Diffuse Sarcamatous Disease: boy, aged 14 years. Mr. W. Thomson.

CLINICAL SOCIETY OF LONDON.—Jan. 14, Hydronephrosis of traumatic origin: boy aged 12 years. Mr. Croft.

SURGICAL SOCIETY OF IRELAND.—Jan. 21, Tumour of superior maxillary bone. Mr. Kilgarriff.—Feb. 18, Incised Wound of Forehead: Escape of Cerebral Substance and Arachnoid Fluid: Recovery. Mr. A. E. Douglas.

1. *Holwede and Münnich on an Endemic Outbreak of Croupous Pneumonia.*—Drs. Holwede and Münnich briefly record an account of an epidemic of croupous pneumonia occurring in the village of Over-Sitke, Brunswick, between March 20th and April 2nd, 1880. Of the 400 inhabitants, inclusive of about 50 children, 15 under five years old were attacked, older children and adults escaping. Ten of the cases occurred in separate houses, and two and three in two other houses respectively. For a week previously, and ten days after the above dates, an east wind prevailed. There was an average state of barometer, and the temperature was variable but cold. For some weeks, the majority of the children had been confined to the house on account of the weather. The symptoms, which were those of an ordinary pneumonia, were remarkably uniform. All the children, after playing about during the day, were suddenly attacked in the evening with restlessness, a dry cough, high temperature, and dyspnœa. In two cases there was vomiting, but in none convulsions. In seven cases both lower lobes were dull; in four the right, and in two the left only were attacked; and in two the pneumonia was central. In most, the disease terminated by crisis and sweating on the fifth day, two lasting until the seventh, and one till the ninth. There was no obvious enlargement of the spleen, and all (except one, under a year old) recovered. Neither

before nor after the dates mentioned, though the state of the weather was the same, did any case occur in the village or neighbourhood. But in the previous January, in a distant part of the same village, a mother and two children, living in a household of fifteen people, were attacked within forty-eight hours with croupous inflammation of the lungs, and in two neighbouring houses, a boy and child were seized with the same disease, exactly similar in course to that above described. All these circumstances would seem to point to an epidemic of pneumonia.

6. *Roger and Damaschino on Changes in the Spinal Cord in Infantile Paralysis, and Progressive Muscular Atrophy.*—MM. Henri Roger and Damaschino, in a long and most interesting paper, describe the changes in the spinal cord in the spinal paralysis of children, and progressive muscular atrophy. Several cases are recorded at length, with drawings of sections of the cord, showing the situation and nature of the lesions. The conclusions arrived at are as follows. 1. The characteristic change in infantile paralysis is a lesion of the spinal cord, a consequence of which is atrophy of the nerves and muscles. 2. This lesion is situated especially in the anterior portion of the grey substance, where it appears in the form of patches of softening. 3. This softening is of an inflammatory character, and the affection is a myelitis. 4. Infantile paralysis, therefore, should be called spinal paralysis of infancy. 5. Progressive muscular atrophy differs from infantile paralysis in its symptoms, as well as in its anatomical lesions, the latter consisting essentially of atrophy of the motor cells, without any area of inflammatory softening.

7. *Parrot on Aphthous Vulvitis and Gangrene of the Vulva in Children.*—Dr. Parrot contributes to the March number of the *Rev. de Méd.* an exhaustive treatise on aphthous vulvitis in infants, founded upon an experience derived from 56 cases. Premising that the disease, even under this name, was known to Hippocrates, he proceeds to describe the result of his own observations. Whilst the vulva, especially the labia majora, and less often the labia minora and clitoris, are the constant seat of the disease, it is not necessarily limited to them, but often extends to neighbouring parts, such as the perinæum, margin of the anus, the genito-crural folds, and groins, in different degrees of frequency, in the order enumerated. The appearance of the disease varies at different stages. At the onset, it consists of small rounded or semi-spheroidal elevations of the epidermis, pale, or greyish white, often depressed in their centre, and with a diameter of 1 to 4 millimètres, an dclosely resembling buccal aphthous patches. The surrounding integument is usually but slightly affected, though sometimes red, and slightly swollen. They vary in number from six to fifteen, isolated or in groups, sometimes confluent. This condition lasts from thirty-six hours to three days, and is followed by the second stage, which is marked by ulcers with a grey or yellowish base, surrounded by a red zone, and accompanied by pruritus, which is often severe, and necessitates the employment of some means of restraint from scratching. When the ulceration extends, its edges are raised, and the neighbouring parts much swollen, and of a bright red, especially the labia minora and clitoris. This ulcerative stage constitutes the acme of the disease, whatever its subsequent course, and doubtless, Dr. Parrot observes, may be recovered from without treatment in healthy subjects; though, since all his cases were subjected to systematic treatment, with the result of rapid improvement, he cannot assert this to be the case. Under unfavourable conditions, the ulceration gives place to gangrene, which is not to be regarded, properly speaking, as a complication of aphthous vulvitis, but rather a modification or one of the forms of the disease, which manifests itself under as yet little known conditions. The gangrene may spread to an enormous extent, involving the perinæum, rectum, and integuments around the coccyx, large moist eschars sloughing away, leaving deep excavations. Even from such extensive destruction, recovery may take place with remarkable completeness of restoration, the reparative process seeming to vie with the destructive. The extent to which the system is affected by the local affection, whilst in the aphthous and ulcerative stages, is but slight, and is involved in the general febrile state (measles, etc.) to which the disease is secondary. With the existence of gangrene, the usual severe constitutional symptoms set in, and may be fatal. In those cases which do not proceed to gangrene it is noticeable that the ulcers which spread over the perinæum and rectal mucous membrane extend more rapidly and last longer than those in other regions, probably because of their liability to disturbance and irritation by the excretions. Careful examination of these parts is, therefore, necessary before pronouncing that a cure is effected. It is a remarkable circumstance that enlargement of the lymphatic glands does not occur, or only to the slightest extent. The diagnosis of aphthous vulvitis is easy. The infecting chancre has its own characteristics, and affects the lymphatic glands. The vulvitis, which is often associated with variola and varicella, is indistinguishable from the aphthous form, but the eruption of these diseases reveals the nature of the case. Among the more interesting points in connection with the etiology of the disease are—1. The age, the majority of the cases occurring from the second to the fourth year, the youngest of the 56 children being twenty months old, and the eldest 7½ years. 2. The influence exercised by other maladies. Of the 56, there were associated with measles, 39; with whooping-cough, 4; with varicella, erysipelas, pneumonia, and diphtheria, 1 each; and 9 independently of any other disease. The marked frequency of measles compels us to assume some intimate relation between these two states. What this is, the author confesses himself ignorant of; but he points out that measles leads in many cases to an ulceration of the antero-external surfaces of the arytenoid cartilages, though not of an aphthous character. All the cases of gangrene were observed in children the subjects of measles, which may be explained by a tendency of the febrile blood to form thrombi in the pudendal vessels. It is difficult to state the duration of the disease, but the most intractable ulcers yielded to treatment within eight days. Dr. Parrot does not hesitate to give a favourable prognosis in all cases, recovery from the local affection taking place even when the primary disease may be fatal. The treatment adopted by the author since 1873, whatever the stage of the disease, is to cover all the affected area with an uniform layer of iodoform, and over that a covering of lint. One application will often effect a cure, and rarely more than three are necessary, at intervals of twenty-four hours, preceded by careful washing of the parts. This treatment is sedative rather than painful, and since it has been pursued, cases of gangrene, which, under the old methods of poultices, charcoal pow-

ders, alcoholic applications, chlorate of potash, nitrate of silver, etc., were frequent, are now unknown.

8. *Owen on Maxillary Abscess and Necrosis in Childhood.*—In this paper, Mr. Edmund Owen strongly advises the immediate removal of an irritating tooth, no matter to what extent the jaw might be fixed or how great the inflammation, and not to wait for the latter to subside under poulticing.

9. *Finny on the Croton-Oil Treatment of Tinea Tonsurans.*—Dr. Magee Finny, referring to a paper by Dr. R. Liveing (see LONDON MEDICAL RECORD, March, p. 127), expresses his entire agreement with Dr. Liveing, but is inclined to extend the limit of age suitable for the treatment, since he has successfully pursued it in children between 5 and 8 years old; and he also refers to Dr. Ladreit de Lacharrière, who prefers a mixture of the oil with cacao butter and white wax, in the proportion of 100 oil to 50 of each of the other ingredients, and has employed it in children between 2 and 5 years of age.

12. *Jacobi on Anæmia in Infancy and Early Childhood.*—The most important part of Dr. Jacobi's very suggestive paper on anæmia in infancy and early childhood is that which explains the reason of the exceeding frequency of this affection. Quoting from Denis, Poggiale, Wiskemann, Nasse, and others, he shows that the blood of the newly born differs greatly from that of the infant at a period but little advanced, especially in the amount of hæmoglobin it contains, the quantity being greater at birth than at any subsequent period of life, but immediately diminishes until about the sixth month, when it slowly increases up to the thirtieth year. Apart from the quite newly born, 'the infant and child has and requires more blood in proportion to its entire weight; but this blood has less fibrine, less salts, less hæmoglobulin, less soluble albumen, more white blood-corpuscles, and less specific gravity'. The large arteries in the newly-born and the infant are wide, and consequently the blood-pressure is but low, this being mainly so in the first five years, during which period the whole body grows in both length and weight in greater proportion than at any subsequent period; thus it appears that the growth and physiologically low blood-pressure go hand in hand. At the same time the excretion of carbonic acid and urea is greater relatively than in the adult. The various organs contain a larger amount of water than the smaller specific gravity of the blood appears to justify. 'The labour required of both heart and lungs is greater than in the adult; thus fatigue is more easily experienced, and the necessity of sleep, the interruption or absence of which adds to the exhaustion and waste, is readily explained. More physiological work is done by these two organs, and moreover in a manner somewhat different from what we notice in the fully developed individual. In him nothing is required but the sustenance, or rather constant reproduction of the bulk of the body; in the child not only reproduction, but a new development of tissues, a constant growth must go on. Within one year after birth the young creature attains three times its original weight. Thus we have to deal with a being whose organs are in constant exertion, or almost over-exertion, and all this at the expense of a blood which contains less solid constituents than the blood of the old. Thus the normal oligæmia of the child is in constant danger of increasing from normal physiological processes. The work before a baby has to be performed under the most favourable circumstances with, so to speak, a scarcely sufficient capital. The slightest mishap reduces the equilibrium between that capital and the labour to be performed, and the chances for the diminution of the amount of blood in possession of the child are very frequent indeed. Thus, the vulnerability of the young being great, and diseases in early infancy and childhood so very frequent, cases of anæmia are met with in every day's practice and in every form, complicated and uncomplicated, with great emaciation or without it, and either curable or not.' Dr. Jacobi considers that this subject has received adequate treatment only at the hands of Dr. Förster in Gerhardt's *Manual of Children's Diseases*, who like others distinguishes between idiopathic and symptomatic anæmia. It is probably questionable whether a genuine idiopathic primary anæmia exists except in the sense of the above explained physiological predisposition to it becoming exaggerated. The majority of cases being secondary, are of most diverse origin; in fact every disease occurring in both infancy and childhood may give rise to anæmia, and the diagnosis of the whole case must extend to the organ first affected, and the treatment, while it may be directed against the result, is incomplete unless the causal indications be fulfilled. Among the conditions most likely to lead to anæmia are hæmorrhage; deficient or improper food; premature birth; congenital diseases as syphilis and neoplasms; peculiar smallness of heart and arteries, as Virchow pointed out; acquired diseases, such as acute rheumatism or endocarditis; protracted diarrhœa; malaria; nephritis; rickets; scrofula; and diseases of the lungs and pleura. In anæmia the skin and mucous membranes are pale, of a yellowish hue, thin and flabby. Those organs or tissues which are least in use emaciate first; that is, in very young children the fat and muscle; but the former is, on the contrary, frequently increased in amount owing to the deficiency of oxidation permitted by the deteriorated red blood-corpuscles. The wasting of the brain does not increase at a rate corresponding to that of the other organs, and any baby with considerable depression of the fontanelles must be considered in danger from the degree of inanition present. Hæmic *bruits* are frequent, and also cranial murmurs, which are not limited to rickets, but are found in all conditions in which blood-pressure in the large arteries of the cranial cavities is lessened. Though the brain is relatively but little emaciated in anæmic headache, sleepiness or sleeplessness may occur and pass off as the anæmia is relieved. Very few anæmic children have good appetites, except at first. The slowness and insufficiency of the circulation are apt to cause catarrh of the larynx, pharynx, and respiratory organs, and attacks of other diseases are but ill-resisted by such children. In respect to treatment, Dr. Jacobi repeats the oft-quoted instructions concerning feeding, weaning, etc.; although on several points his advice is not in accordance with the plan usually pursued in this country, *i.e.*, he says, 'Avoid cow's milk either undiluted or diluted with water only. Use no milk without the addition of some gelatinous or farinaceous decoction, barley, oatmeal, gum arabic gelatine.' The value of iron, arsenic, phosphorus, strychnia, and cod-liver oil, is fully dwelt on, especially of the first, the preferable preparations being the lactate, tincture of the pomate, iodide, pyrophosphate, subcarbonate, and tincture of the chloride.

13. *Gee on Tubercular Peritonitis in Children.*—In his clinical lectures on this subject, Dr. Gee describes three kinds of tubercular abdominal disease in children; 1. Chronic peritonitis; 2. Decay of the mesenteric glands; 3. Ulceration of the intestines

Referring to the first only, he considers the following to be pathognomonic signs. *a.* Indurations in the form of bands, patches, lumps, or knots, very variable in situation, but always present and first felt in the abdomen, two or three weeks after the illness begins. *b.* Suppuration, indicated by a discharge of pus from the navel (which may, however, be only swollen and red) due to local peritoneal abscess. There is generally some tympanites, and less commonly ascites. There is frequently abdominal tenderness, and sometimes severe pain. During the progress of the disease the health fails, there are loss of appetite, progressive emaciation, slight fever, extreme irregularity of bowels, varying from occasional or continual diarrhœa to extreme constipation, and even fatal obstruction. In the majority of cases the onset is gradual, but the disease sometimes sets in suddenly with all the symptons of gastro-enteritis. Dr. Gee states that recovery is common even when suppuration from the navel exists, the tympanites and indurations slowly disappearing, though the patient may be left pale and weak for life. A fatal result is due to exhaustion, extension of the tuberculosis, extreme tympanites, or intestinal obstruction. If the peritonitis have extended to perforation of the intestines, death may be expected. For treatment, absolute rest in bed is essential; the abdomen should be kept wrapped in flannel, the diet should consist of easily digested food and cod-liver oil, and pain may be relieved by hot applications.

14. *Porcher on the Gastric Remittent Fever of Infants and Young Persons.*—Dr. Porcher of Charleston endeavours to restore to the roster of diseases as 'a distinct, separate, isolated affection, and not by any means very rare', a certain collection of signs and symptoms under the term gastric remittent fever. He complains that the majority of his professional brethren pay little heed to the existence of any such affection, and considers it most improperly 'divided up among or merged in typhoid, malarial remittent, typho-malarial, ephemeral, and worm fevers'. He regards the stomach, and, perhaps, the duodenum, and not the intestines, as the seat of the disease, the source of which is local and the cause irritation, such as repeated improper food. On the occurrence of some disturbing cause, such as a cold, there is developed a fever, marked by daily morning remissions, which are not of the regularity found in typhoid. The fever is rarely very high (100 deg. to 103 deg.), and the duration one to two weeks, when it slowly disappears, and is seldom, if ever, fatal. The affection, which commences with constipation, is further characterised 'by a slight tenderness, upon pressure, over the stomach and duodenum, by a mild and evanescent delirium, especially upon waking, even during the day; by the absence of the characteristic look of typhoid fever, and by a tongue pointed and red at the point and margin, with a white fur in the centre'. Dr. Porcher asserts that, though frequently associated with malaria, it does exist independently of that complication, and, though occurring chiefly in children, not exclusively so. The treatment should begin with mild mercurial alteratives, and be continued by alkalis, such as carbonate of soda, with sweet spirits of nitre, with occasionally the addition of small doses of camphorated tincture of opium. [It is not easy to understand the grounds upon which Dr. Porcher emphatically insists on the restoration of the long-since exploded term 'gastric remittent fever'. His description of the disease does not seem to present any novel features, nor anything to separate it from gastro-duodenal catarrh, except, perhaps, the suggestion to treat it with opium.—*Rep.*]

15. *Gibney on Perityphlitis in Children.*—The object of this paper is mainly that which Dr. Gibney, in a previous communication on perinephritis (*vide* London Medical Record, Dec. 1880, p. 498), set forth, viz., the frequency with which cases of morbus coxæ may be mistaken for perityphlitis, or, more widely speaking, iliac or subfascial abscess. In support of this view, six cases are recorded, which also show the favourable results of desiccation.

W. H. Allchin, M.B.

DISEASES OF THE THROAT.

RECENT PAPERS.

1. Labus.—Removal of a New Growth from the Trachea by Operation through the Natural Passages. (*Rev. Men. de Laryn.*, March 1881.)

2. Bruns.—Resection of the Larynx in Cases of Stenosis. (*Berl. Klin. Woch.*, No. 38 and 39, 1880.)

3. Böcker.—Laryngotomy for the Removal of Benign Growths in the Larynx. (*Berl. Klin. Woch.*, Feb. 21, 1881.)

4. Argyrism following Repeated Applications of Nitrate of Silver to the Pharynx. (*New York Med. Rec.*, Jan. 29, 1880; and *Rev. Men. Laryn.*, March 1881.)

5. Steinmeyer.—Successful Tracheotomy in an Infant nine weeks old. (*Berl. Klin. Woch.*, No. 40, 1880)

6. Oertel.—The Treatment of Pharyngeal Diphtheria. (*Archives of Laryngol.*, Jan. 1, 1881.)

7. Allen, Harrison.—A Case of Retropharyngeal Abscess in the Adult. (*Arch. of Laryngol.*, Jan. 1, 1881.)

8. Schroetter.—Local Anæsthesia of the Larynx. (*Allgem. Wiener Med. Zeit.*, March 15, 1881.)

9. Tauber.—Occlusion of the Larynx. (*Arch. of Laryngol.*, Jan. 1, 1881.)

10. Herterich.—A Case of Mycosis of the Trachea. (*Aertz. Intel.-Blatt*, No. 43, 1880.)

11. Schmidt.—The Treatment of Laryngeal Tuberculosis. (*Wiener Med. Presse*, No. 37, 1880; and *Arch. of Laryngol.*, Jan. 1, 1881.)

12. Hopper.—Concussion of the Larynx: Aphonia. (*Arch. of Laryngol.*, Jan. 1, 1881.)

13. French.—Impaction of a Large Piece of Bone in the Trachea. (*Ibid.*)

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1. *Labus on the Removal of a Growth in the Trachea by Operation through the Natural Passages.*—The patient (*Revue Mensuelle de Laryngol., etc.*, March 1881) was a boy, aged 13 years, who had for a year had great difficulty in breathing. On making the least exertion violent dyspnœa came on, and coughing fits were constant. The larynx was normal. At the moment of inspiration a tumour appeared below the vocal cords, almost entirely blocking up the lumen of the glottis. It was immovable during inspiratory and expiratory movements. Dr. Labus introduced Türck's forceps through the mouth, and, by passing its curved branches beneath the vocal cords, was able to seize the growth and extract it almost entire. There was some slight hæmorrhage. Respiration immediately became normal. On microscopic examination, the tumour was found to be a fibro-sarcoma.

2. *Bruns on Resection of the Larynx for Laryngeal Stenosis.*—Dr. Paul Bruns (*Berl. Klin. Woch.*, 1880, Nos. 38, 39; *Med.-Chir. Central.*, 1880, No. 24) has in view not so much those slight forms of stricture, in which the contraction of the lumen of the larynx has reached only a moderate degree, or where it has been caused by the formation of a cicatricial

membrane. He describes rather the most severe forms, the so-called cylindrical strictures, in which the stenosis is very narrow, and at the same time spreads over the greater portion of, or even the entire larynx. Although in severe cases gradual dilatation by Schrötter's process may be so far accomplished, that when the cannula is closed breathing through the larynx is possible, still this treatment must be considered as very tedious. Dr. Bruns wishes, therefore, to confine the treatment by dilatation to the comparatively mild forms of tubular stenosis. In severe cases, where the cartilaginous structure is still preserved, laryngotomy has to be performed. A laryngeal cannula must be introduced beforehand, over which cicatrisation of the wound takes place, while respiration through the mouth is re-established. If the cartilaginous structure be already broken up by necrosis, then Heine's subperichondral resection is advisable, in order to make the introduction of a laryngeal tube possible. The best form of cannula was found to be that of the author, made after the style of Richet's cannula. To the vertical piece of pipe an apparatus can be attached for the practice of speaking. This annex carries at its upper end two India-rubber membranes, by which the produced voice acquires a greater resemblance to the human one. There is also a mechanism in the cannula, which allows only the inspired air to pass through the outer opening, whilst the expired air has to escape through the phonation-tube. As soon as the wound is healed, and the laryngeal canal is consolidated, a tube more comfortable to the patient is applied. In the first place, a tracheal tube connected with the cervical plate is introduced, and then through an opening in the anterior wall of the same a laryngeal tube is passed in. With this arrangement it is easier to introduce, according to need, either the respiration-tube or the phonation-cannula. The objections to this treatment are 1. The loss of phonation; and 2. The use of the cannula, which prevents an entire cure. It must be remembered, however, that in those cases where the operation had been resorted to, the voice has already been lost for some time.

3. *Böcker on Laryngotomy for the Removal of Benign Growths in the Larynx.*—Dr. Böcker enumerates the dangers attending laryngotomy (*Berl. Klin. Wochen.*, Feb. 21, 1881), as hæmorrhage, pneumonia from blood and the secretions of the wound, inflammatory swelling of the mucous membrane, and stenosis. During the operation, the vocal cords are liable to be cut, as the middle line cannot always be determined, owing to the occasional unequal development of the thyroid cartilage. The knife, moreover, may easily deviate from the middle line during the movements of coughing and breathing. Then, in the course of convalescence, chronic inflammation, thickening, or adhesion of the vocal cords, formation of granulations in the anterior commissure, etc., may occur. The author quotes two cases where aphonia resulted from the operation, one in consequence of granulations growing in the anterior commissure, the other from defective closure of the thyroid cartilage and distortion of the vocal cords.

4. *Argyrism following Repeated Applications of Nitrate of Silver to the Pharynx.*—A woman, aged 46 years (*New York Med. Record*, Jan. 29, 1881, and *Revue Mensuelle de Laryngol., etc.*, March 1881), presented a bluish discoloration of the skin. Frequent cauterisation with lunar caustic had been previously applied to the pharynx. Dr. Krishaber has already mentioned a similar case, and a second has been published in the *Gaz. Med. Ital.*, 1862. The absorption might have taken place at the spot of application, or it might have been brought about by the cauterised *débris* falling into the alimentary passages.

5. *Steinmeyer on Successful Tracheotomy in an Infant nine weeks old.*—This case is reported in the *Berl. Klin. Wochen.*, No. 40, 1880, and in the *Archives of Laryngol.*, Jan. 1, 1881. Cough and difficulty in breathing had existed for a week. The infant exhibited the usual symptoms of obstruction in the larynx. A laryngoscopic examination could not be satisfactorily made, but a very slight non-fluctuating swelling was found to the right of the thyroid cartilage. Tracheotomy was performed, but with great difficulty, the operation lasting an hour. The trachea was no larger than a goose-quill, and was displaced considerably to the middle line. The cyanosis quickly disappeared, and the infant soon recovered. Four days after the operation, the swelling over the thyroid body enlarged and reddened. It was incised through the tracheal wound, and pus was let out. On the thirteenth day after the operation, a quantity of fœtid pus was discharged through the mouth and the tracheal wound. The cannula was removed the following day, and the child soon completely recovered. The case was thought to be one of retropharyngeal abscess.

6. *Oertel on the Treatment of Pharyngeal Diphtheria.*—Dr. Oertel directs his treatment (*Archives of Laryngol.*, Jan. 1, 1881) first, to the destruction of the cause of the disease; and second, to the removal of the products from the affected parts. For the former, he thinks carbolic acid a most efficient remedy. When the results obtained from its use have been unsatisfactory the solution has not been sufficiently strong. Of twenty-seven of the graver cases which have been treated by Dr. Oertel, he believes that three-fourths would have ended fatally but for the use of carbolic acid. He employs a 5 per cent. solution nebulised by means of a steam-atomiser, and avoids the use of a brush or sponge, as he thinks these only irritate the parts. He considers the absorption of the carbolic acid by the lymphatics of the oral and pharyngeal cavity exceedingly important, for the purpose of making the absorbed mucous products harmless. He further believes in a beneficial influence exerted by carbolic acid upon the blood. A rapid amelioration of the disease always appeared with the excretion of dark, olive-green urine. The inhalations are made every two or three hours, or even oftener, and last from two to five minutes, according to the severity of the disease and the strength of the patient. As the patient improves, the inhalations are made less often, and are of shorter duration. If the urine change colour strikingly, or if gastric disturbances occur, the inhalations are reduced in number. If the urine become dark-coloured, they are discontinued for twenty-four hours, and other solutions, such as one containing from 2 to 4 per cent. of boracic acid, or 5 per cent. of benzoate of soda, are substituted, the carbolic acid treatment being recommenced when the urine has regained its natural colour. To hasten the separation of the diphtherial membranes, Dr. Oertel advises two methods: 1. The loosening of the membranes by suppuration; 2. The mechanical raising of the membranes by exciting increased secretion of mucus. The first method mainly involves the employment of heat, which promotes suppuration, and thereby demarcation and separation of the membranes. Hot vapours or

steam are used, for a quarter of an hour at a time, from four to eight times a day, together with the carbolic acid treatment; and under these means the extension of the diphtherial deposits soon ceases. The hot inhalations are reduced in number when the separation is fairly progressing, but the carbolic acid is continued for two days, to prevent a renewed infection of the mucous membrane. Dr. Oertel finds other local remedies decidedly inferior to carbolic acid. Lime-water and lactic acid, though able to swell and dissolve fibrinous coagula, possess no antiseptic or disinfectant properties, and are not indicated in pharyngeal diphtheria, as in the mouth and pharynx there is no danger of stenosis. To stimulate the secretion of mucus underneath the deposits, and so mechanically to lift them up, and at the same time to remove the fungous growths and septic matters from the mouth, Dr. Oertel uses muriate of pilocarpin, which he gives in doses of 1 to 5 centigrammes (0.15 to 0.75 grain) dissolved in water. The rapid separation of the membrane, which took place in a case accidentally complicated by salivation, led Dr. Oertel to try this remedy. In adults, when the morbid process has lasted some days, he makes a subcutaneous injection of from 1 to 2 milligrammes (0.015 to 0.03 grain) of pilocarpin.

7. *Allen on a Case of Retropharyngeal Abscess in the Adult.*—The patient (*Arch. of Laryngol.*, Jan. 1, 1881) had experienced a difficulty in swallowing for a month. Four months before, he had recovered from a psoas abscess. On examination, a fulness was felt over the thyroid cartilage, the upper portion of which projected to the right side. The pomum Adami was obliterated. The cervical lymphatic glands on the right side were enlarged. The laryngoscope revealed a large swelling of the laryngo-pharynx, broad at the base, elastic to the touch, of a bright red colour, of the size of a guinea-hen's egg, and obliterating the right half of the epiglottis. The collection was opened by Mackenzie's laryngeal knife, and two ounces of pus escaped; the patient made a rapid recovery. This case has several features of interest. In location, the abscess resembled a circumscribed laryngeal abscess. Its walls, however, were evidently composed of mucous membrane of the pharynx, and, therefore, outside of the laryngeal aperture. The larynx was intact, the voice perfect, with no history of chondritis or perichondritis. The outward and upward pressure of the pus against the great cornu of the hyoid bone and the superior cornu of the thyroid cartilage, explained the displacement of the larynx. Compared with descriptions of circumscribed laryngeal abscess, the case agrees in the occurrence of dysphagia, but differs in the absence of hoarseness, aphonia, pain, and cough. The abscess, when opened, was not discharged with cough, as is mentioned to be the case in true laryngeal abscess. Compared with descriptions of retropharyngeal abscess, the case agrees in the presence of a swelling behind the angle of the jaw, and the involvement of the cervical lymphatic glands.

8. *Schroetter on Local Anæsthesia of the Larynx.*—Professor Schroetter, who has not been able to produce anæsthesia of the larynx to his satisfaction by the use of bromide of potassium, tannin, ether-spray, subcutaneous injections of morphia, carbolic acid, etc., now uses Türck's method in a modified form, which he describes in the *Allgemeine Wiener Med. Zeit.*, March 15, 1881. The day before the operation the larynx of the patient is painted twelve times with pure chloroform, the object of which is to produce a hyperæmia of the mucous membrane, and so prepare it for the reception of the narcotic. This lasts from seven to nine minutes, and, as it causes a violent burning, is the most disagreeable part of the operation. After an hour, twelve paintings of concentrated solution of morphia (muriate of morphia, 1 part; distilled water, 10 parts) are applied, the patient being told to expectorate after each application, and to thoroughly cleanse his mouth and throat with a tannin gargle. He then sleeps, but must be watched during the night by the physician or other competent person, with proper antidotes (such as tea, coffee, etc.) in readiness. Dr. Schroetter has however, found that, when the proceeding has been conducted with the above caution, there have not been any symptoms of poisoning, or, if any, but very slight. The larynx by eight o'clock the next morning has usually become so insensitive, that the operation may be at once proceeded with. Occasionally, the morphia application has to be repeated. Excellent as Dr. Schroetter considers this method to be, he does not make use of it often, for the reason that it is seldom necessary. For the removal of polypi, etc., a preliminary practice of introducing the sound a few times is sufficient. The painting with the chloroform is so disagreeable a proceeding, that he does not willingly resort to it. The importance, however, of being able to effectually produce local anæsthesia of the larynx is seen by the following case. A young man was brought into the hospital, with a bone apparently lodged in the larynx. On laryngoscopic examination, a flat bone about 1 centimètre long could be seen during inspiration under the left vocal cord. On both sides of the bone, between it and the laryngeal wall, was a half-moon-shaped space, through which the patient only just audibly breathed. As the bone could not be removed by any other means, Dr. Schroetter tried to extract it with the forceps; but, owing to the sensitive condition of the parts, the instrument could not be introduced. Local anæsthesia was begun the same evening. The patient bore the paintings of chloroform better than usual, and, later on, the morphia solution was applied, the caution before alluded to being observed. The patient had no bad symptoms. In the morning, although the anæsthesia of the larynx was almost perfect, morphia was again applied by way of caution; and, by ten o'clock, the forceps could be introduced with the greatest ease, and the bone was extracted in two pieces. The following morning the anæsthesia was still present, but by evening had entirely disappeared.

9. *Tauber on Occlusion of the Larynx.*—The case is reported in the *Arch. of Laryngol.*, vol. ii, Jan. 6, 1881. The patient, aged 28, had suffered for two or three years with dyspnœa, aphonia, and painful deglutition. On laryngoscopic examination, the epiglottis could be seen, but not the interior of the larynx. In its stead a smooth flat band extended from the left to the right sinus pyriformis, and covered the arytenoid cartilages and false and true vocal cords, and concealed the laryngeal aperture. The attachment of this band on the right side was not so broad as on the left, and ended in the shape of a funnel. On the right side, the band was open to the extent of three or four lines. Through this opening respiration went on. The band was separated by the laryngeal knife, and removed by evulsion-forceps. A normal glottis then came into view. The larynx (two and a half years afterwards) is now in a normal condition, and the voice is distinct. The band proved to be fibrous in structure. The family history

of the patient was good: there was no history of syphilis or phthisis.

10. *Herterich on a Case of Mycosis of the Trachea.*—The patient, aged 19 (*Aertz. Intel.-Blatt*, No. 43, 1880), suffered, apparently, from a slight catarrh of the throat. Every eight or ten days he coughed up firmly formed grey sputum. One of these pieces was examined, and was found to consist of a glassy mucus, containing a solid lump of the size of a bean, kidney-shaped, flat, one surface uneven and knotty, the other smoother. The edges were dentated; the colour was grey, shading into yellow. The uneven surface had a velvety appearance. The mass easily crumbled, and appeared of the same consistence throughout. The laryngoscope revealed the larynx everywhere strongly injected. At a level of the sixth, seventh, and eighth rings the mucous membrane appeared slightly ulcerated, and lower down hyperæmic and somewhat excoriated. There was no mucus covering it. Dr. Herterich is of opinion that this ulcerated portion of the tracheal mucous membrane was the spot where the peculiar sputum was formed, and he succeeded in tracing the formation of sputum at this situation with the laryngoscope. Inhalations of iodine thrice daily for a fortnight produced a marked improvement. Microscopical examination of the sputum showed that the whole formation consisted of abundantly proliferating fungus.

11. *Schmidt on the Treatment of Laryngeal Tuberculosis.* — To disinfect the wound-surfaces Dr. Schmidt advocates (*Wiener Med. Presse*, No. 37, 1880) inhalations of chamomile-water medicated with carbolic acid, balsam of Peru, and creasote-glycerine. He finds that the flat ulcers heal in a few weeks, but that deep ulceration is always slow to improve. Since this treatment often fails to reduce the infiltration or cause cicatrisation of ulcerations, Dr. Schmidt employs extensive scarification by means of a scissors-like instrument, whose branches close like those of a guillotine. The points of the blades are rounded to facilitate introduction; the one for the left ary-epiglottic fold has near its end a short curve towards the right, in order that the fold may be cut at a right angle. The scissors are introduced closed over the epiglottis, then opened and the blades pressed downwards, one lying in the larynx, the other in the pharynx. The cut is now quickly made through the interlying thickened part of the infiltrated posterior laryngeal wall. If the infiltration do not entirely disappear after large incisions have been made, they must be repeated a second or even a third time. But little pain and bleeding follow the operation; the swelling subsides, the infiltration begins to disappear, and in a few days the incision has healed. Dr. Schmidt deals differently with an infiltrated epiglottis. He scarifies its laryngeal face thoroughly with a special knife, which is carried down to the cushion of the epiglottis, and the incision is powerfully made through the entire length of the epiglottis as the knife is withdrawn. The incisions should be made thoroughly, and at an early date. The author says this method does not always cure the patient. In certain cases, palliative treatment is the only means of relief.

12. *Hopper on Concussion of the Larynx followed by Aphonia.*—Dr. Hopper relates the case of a man, aged 23 years (*Archives of Laryngol.*, Jan. 1, 1881), who fell against the projecting edge of a shelf, striking the larynx about the level of the crico-thyroid membrane, slightly to the left of the median line. Moderate tenderness, swelling, and difficulty in phonation followed. In twelve hours, the patient could only speak with great effort, and in a whisper. There was a feeling of fulness in the throat, and a constant desire to swallow, but no pain nor dyspnœa. In five or six days, spontaneous improvement began, and the voice gradually returned, but at first was husky, and limited to the lowest tones, and showed an absolute inability to inflect. Two months after the accident, the patient could talk quite easily in a fairly strong voice, although with a certain effort in phonation, and an impossibility to attain so high a pitch as before the accident. Two cases of a similar injury, but of a more serious character, are reported by Dr. Beverley Robinson in the *New York Med. Record*, May 1, 1874, and May 6, 1876.

13. *French on the Impaction of a Large Piece of Bone in the Larynx and Trachea.*—A woman, aged 35 years (*Archives of Laryngol.*, Jan. 1, 1881), swallowed a piece of bone while taking soup, and immediately felt a pain in the throat, and difficulty in breathing and loss of voice. On laryngoscopic examination a few hours afterwards, a piece of bone was seen lying along the entire length of the rima glottidis, extending into the trachea a considerable distance. An attempt was made with Türck's tube-forceps to remove the bone; but, although it could be grasped, it was too tightly impacted to be moved. The symptoms becoming urgent, tracheotomy was performed. The forceps was introduced through the opening, the bone was grasped, and, after much difficulty, was dislodged and removed. Had more force been used, the mucous membrane must have been severely lacerated, as a hook-like process, which had probably been embedded in the posterior wall of the trachea, had been the reason of the failure to dislodge the bone. The lacerations healed in a few days.

W. J. WALSHAM.

PHYSIOLOGY.

RECENT PAPERS.

1. DALTON, J. C.—Centres of Vision in the Cerebral Hemispheres. (*New York Med. Record*, March 20, 1881.)
2. CASH, H.—The Respective Shares of the Stomach and Intestine in the Digestion of Fats. (*Arch. für Anat. und Physiol.*, 1880.)
3. ADAMS, H. B.—The Excretion of Hæmoglobin by the Kidney. (*Cent. für die Med. Wiss.*, No. 13, 1881.)
4. RICHET.—On Recent Opinions Relative to the Gastric Juice. (*Le Prog. Méd.*, Nos. 17, 18, 1881.)
5. DROSDA.—On the Nature of Narcosis. (*Deutsches Archiv für Klin. Med.*, Band xxvii, Heft 344.)

1. *Dalton on Centres of Vision in the Cerebral Hemispheres.*—Dr. J. C. Dalton (*New York Med. Rec.*, March 26th, 1881) says that Ferrier's statement as to the localisation of vision in the angular gyrus having been received with incredulity, he has undertaken certain investigations, with a view to determine the question. His experiments were performed on dogs. In the first, the cerebral convolutions in the left parietal region were exposed by trephining, and a circular layer of brain-substance, 17 millimètres in diameter and 7 millimètres in average thickness, was removed by incision, the blood being absorbed by cotton-wool, and the wound closed by sutures. On the following day, the animal was in fair condition, but vision was certainly abolished in the right eye, and certainly present, apparently to a normal extent, in

the left eye. The dog died on the following day comatose, and *post mortem* examination showed destruction of the whole turn of the angular convolution, and a part of the two convolutions nearer the fissure of Sylvius. In a second experiment, the results obtained were similar in character to those above described, and lasted twelve days, when the animal died comatose. He points out that this persistence of the blindness differs from Ferrier's observations on monkeys, where vision was restored in twenty-four hours. He thinks it possible that these variations may depend upon the differences in the completeness of the decussation in the optic tracts. He thinks that the following conclusions are warranted. 1. Extirpation of the angular convolution causes loss of visual perception on the opposite side. 2. This operation is not followed by any disturbance of the intelligence, attitude, power of locomotion, or general sensibility. 3. It does not interfere with the local sensibility of the retina or conjunctiva, the reaction of the pupil to light, nor with the normal consentaneous movements of winking. Its effects are, therefore, confined to the exercise of visual sensibility.

2. *Cash on the Respective Shares of the Stomach and Intestine in the Digestion of Fat.*—Dr. Th. Cash (*Archiv für Anat. und Physiol.*, 1880, s. 323, and *Centralb. für die Med. Wissensch.*, No. 13, 1881) has investigated the digestion of fat by feeding dogs, which had been kept fasting for eighteen hours previously, with fat and starch, and killing them four hours afterwards. The intestine was tied in short lengths, then the various divisions were opened in order, their reaction tested, and the contents passed into a beaker. The contents of the small intestine from the pylorus to the cæcum gave an acid reaction, and contained fat-globules, an emulsion being nowhere visible. Further experiments were made to determine whether fat-splitting occurs in the intestine, by feeding the dogs with completely neutral fat. In the stomach, there were neutral fat, fatty acid, and probably lactic acid; in the small intestine, neutral fat, fatty acid, a little bile-acid, and probably lactic acid; in the chyle, neutral fat and fatty acid. In a dog, whose pancreatic duct had been tied some days before, the lacteals contained fat-emulsion after feeding with fat. According to these observations, fat-splitting occurs in the stomach. In fact, he succeeded in obtaining, by digestion with gastric mucous membrane and dilute hydrochloric acid, a formation of fatty acids.

3. *Adams on Excretion of Hæmoglobin by the Kidney.*—Dr. H. Bridges Adams (*Centralb. für die Med. Wissensch.*, No. 13, 1881), in order to prove, as Heidenhain did, that indigosulphate of soda and other materials were secreted by the cells of the convoluted urinary tubules, has undertaken, under the direction of Cohnheim and Weigert, certain investigations on the artificial excretion of hæmoglobin, fat and albumen. The kidneys were, after Posner's method, hardened for cutting by boiling, and those containing fat afterwards prepared, and the sections treated with osmic acid and glycerine. Hæmoglobinuria was induced by injecting glycerine under the skin; bile into the blood, under the skin, or into the abdomen; ether into a main artery; water into the carotid; blood, made like lac dye by freezing and thawing, into the abdominal cavity. In all instances, the hæmoglobin was in the capsules and tubules; found in various divisions of the latter, according to the duration of the hæmoglobinuria. Excretion of fat was induced by injecting milk into the carotids or the abdominal cavity. The capsules contained only a few drops, while the convoluted tubes, and especially the straight tubes, contained much fat. Dr. Adams is disposed to regard this as due to the rapid escape of the fat down the tubes from the capsule. Albuminuria was induced by injecting egg-albumen into the carotid, or into the abdominal cavity. In none of the six cases was he with certainty able to determine that the excretion of albumen had taken place in the capsule, as related by Posner and Ribbert. Finally, he found that the bacteria of splenic fever also are excreted through the vessels of the Malpighian tuft.

4. *Richet on Recent Opinions relative to the Gastric Juice.*—Ch. Richet (*Le Prog. Méd.*, Nos. 17 and 18, 1881), having referred to the objections made to the opinion that hydrochloric acid is really the acid of the gastric juice, on the ground that it acts differently with colouring agents, and in many other chemical and physical properties differs from an aqueous solution of hydrochloric acid, relates an experiment in which the fresh stomach of a calf is washed and digested in about 100 cubic centimètres of distilled water and ¼ per cent. of hydrochloric acid, and filtered. The liquid thus obtained behaves in all respects like gastric juice, and not like an aqueous solution of hydrochloric acid. He shows also that an aqueous solution of hydrochlorate of leucin does not act like an aqueous solution of hydrochloric acid, but like gastric juice. He holds that it is probable that the acid of the gastric juice is hydrochlorate of leucin, and that not only leucin, but other albuminoids, act as bases to the hydrochloric acid, of which he regards pepsin as probably one. With respect to pepsin, he is quite sure that alcohol should not be employed in its manufacture, and advises the following method. Infuse the gastric mucous membrane in water acidulated with phosphoric or sulphuric acid, then precipitate the filtered liquid with lime-water. The sulphate or phosphate of lime in precipitating carries the pepsin with it mechanically. M. Richet has undertaken certain experiments to determine how far M. Hallopeau was justified in comparing pepsin to the organised insoluble ferments, such as yeast. He found that carbolic acid does not prevent the action of pepsin or pancreatin, even when present in as large a proportion as one in fifty. He also found no difference between the activities of the higher and lower strata of glycerine solutions of pepsin and pancreatin allowed to stand for some weeks, as would be expected if the ferment were molecular, and not in solution. In testing the effects of filtration, his results were uncertain. Filtered pancreatin showed undiminished activity, while filtered pepsin was inert.

Robert Saundby, M.D.

5. *Drosda on the Nature of Narcosis.*—This author has carefully observed thirty patients narcotised with methylbichloride (CH_2 Cl_2), half an ounce of the substance being used on an average to produce anæsthesia for twenty-eight minutes. He finds (*Deutsch. Archiv. für Klin. Med.*, Band xxvii, Heft 3 and 4, p. 339, 1880) that children, anæmic and badly nourished individuals, require less than robust adults, and that old individuals with sound vessels are more easily narcotised than those having sclerosed arteries. During the administration of the anæsthetic, slight excitement, with increased blood-pressure and frequency of pulse and respiration, was followed by a gradual sinking of the pulse and respiration, narrowing of the pupil, pallor, and complete anæsthesia. Vomiting happened in 50 per cent. In a boy with open fontanelles these were distinctly de-

pressed. If the inhalations were continued the pupils became suddenly wide, the pulse small and frequent, and the respirations rapid and shallow. The author believes that anæsthesia consists fundamentally in a cerebral anæmia, which may proceed to paralysis of the medulla oblongata; in order to avoid which, the inhalations ought to be interrupted at intervals. The sudden deaths at the beginning of the inhalation are caused, he believes, by contraction of the vessels, not in the central nervous system, but in the muscle of the heart itself.

JAMES ANDERSON, M.D.

THE CONGRESS OF GERMAN SURGEONS.

The tenth Congress of the Society of German Surgeons was held in Berlin on April 6th, 7th, 8th, and 9th, under the presidency of Professor von Langenbeck, who was again elected to the office. The members of the Congress met each afternoon in the great hall of the University, for the reading and discussion of papers; and morning meetings were held in the amphitheatre of the Royal Clinic in the Ziegelstrasse, when interesting cases were exhibited and discussed.

I.—PAPERS READ.

The Theory of Prophylactic Inoculation. — Herr Grawitz (Berlin) read a paper on this subject, in which he referred to the experiments of Pasteur and Toussaint. He had cultivated the most common fungi—aspergillus, penicillium, and oïdium lactis, and had introduced them into the animal organism. They were afterwards found in abundance in the liver and kidneys, less frequently in the lungs and brain. When an animal was infected with fungi, the organs resisted a fresh injection, but only for a certain time. The experiments succeeded best with aspergillus; those with oïdium lactis almost entirely failed. The immunity might be disturbed if a large quantity of malignant fungi were injected, or if, subsequently, a fungus were injected which was stronger than that first used.

The Effect of Rapid Withdrawal of Water on the Organism.—Herr Maas (Freiburg) read a paper on the influence of rapid withdrawal of water on the organism, with special reference to heat-stroke and to operations on the abdominal cavity. Having observed that frogs did not bear the removal of relatively small quantities of water, he thought that it might be possible, by repeating similar experiments on warm-blooded animals, to throw some light on the etiology of heat-stroke and of collapse after operations on the abdomen. The injection of a solution of common salt or of sugar into the intestine or under the skin was followed in rabbits by three striking results: viz., a very considerable fall of temperature (9 to 12.5 deg. Fahr.), which soon disappeared on placing the animal in a warm room; a rapid diminution of the blood-pressure, so that the organs of an animal killed in the experiment had an appearance quite similar to those of a man killed by heat-stroke; and solution of the red blood-corpuscles with separation of hæmoglobin, so that the peritoneal exudation, for example, assumed a red colour. These phenomena occurred less distinctly in dogs. While the reduction of blood-pressure was only rarely compensated by the injection of water into the vascular system in rabbits, this occurred as the rule in dogs. The fall of the blood-pressure was easily proved by opening the abdomen. It is known that heat-stroke in man is preceded by a great loss of water, amounting even to as much as two pounds in healthy subjects. The regular occurrence of albumen in the urine in men who are sweating profusely, also indicates a breaking up of the blood-corpuscles. In laparotomy in the human subject, considerable falls of temperature and of blood-pressure are, according to Wegner, recognised results of loss of fluid by evaporation. The conclusion from this as regards treatment is, that a man affected with heat-stroke should have a large quantity of water administered, perhaps by the intestine; but that, when it is intended to perform laparotomy, the patient should previously be allowed to drink copiously, and should be placed in a room containing much moisture.

Iodoform as a Dressing in Tuberculosis of the Bones and Joints.—Dr. Mikulicz (Vienna) read a paper on this subject. Mosetig had published a report of twenty cases, in which, no antiseptic precautions being used, wounds were treated by simply sprinkling iodoform on them, whereby their course was rendered quite aseptic, and the so-called local tuberculosis was healed. In consequence of this, the remedy had been used in Billroth's clinic since the beginning of the year, with a similar striking result. Wounds made in the extirpation of tumours, when sprinkled with iodoform, and covered with a dressing of cotton-wool, healed without secretion, just as wounds heal by granulation under a scab; ichorous sores, under the influence of this remedy, soon lost their putrid smell, and rapidly became clean; tubercular processes also, in the skin, as well as in the joints and bones, were definitely healed by this treatment. The remedy is especially to be recommended in wounds connected with cavities, which come into contact with readily decomposed fluids; as after extirpation of tumours of the pharynx and tongue. In cases of suspected tubercular disease of joints, the injection of an ethereal solution of iodoform appears to be sufficient. If, however, fistulæ be present, the primary focus must be exposed, scooped out, and filled with iodoform; and the fistulæ themselves must be treated with iodoform and gelatine bougies. For injection, an emulsion of iodoform with mucilage of acacia and water is recommended, or a solution of 1 part in 10 of ether, or of 1 in 5 of ether and 5 of oil. Iodoform does not excite any influence at a distance; so that, while very severe local disorders may be healed, death may occur from tubercle of internal organs. Hence the constant contact of iodoform with the diseased granulating surfaces appears to be necessary. Lupous ulcers heal rapidly under iodoform, without previous scraping. According to the researches of Mikulicz, the antiseptic action of iodoform is small but constant; this explains the necessity of its constant contact with the granulating surface. Iodoform does not prevent the formation of micrococci in blood and serum, nor of bacteria in Pasteur's fluid. Its active principle is iodine, which in the tissues is transformed into iodides of potassium and sodium. Toxic symptoms occur only in cases of large wounds, and are of short duration.—Dr. Gussenbauer could confirm the excellent action of iodoform, which he placed before all other known antiseptics as a means of producing healthy granulations. In nineteen cases of tuberculous affections, he had hitherto met with seven rapid recoveries. In a case of extensive tuberculous ostitis of the tarsus, he had poured a large quantity of iodoform into a cavity in the os calcis, with the result of producing a high aseptic fever, which soon passed off. The case was

still under treatment. A similar affection of the carpus was healed, with retention of free action in the joint.

The Significance of Tubercles in Fungous Inflammation of Bones and Joints.—Dr. Sonnenburg (Berlin) contested the doctrine of Volkmann and König, that the inflammation of bones and joints which appears from the pathological appearances to be tuberculous in character, are really tuberculous. He especially disputed the assumption that there are three different manners in which the disease commences: viz., simultaneous invasion of several bones and joints; localised appearance, as the result of general tuberculous dyscrasia; and, finally, local outbreak without any apparent predisposition. He preferred to regard a large number of the merely local so-called tuberculous processes as simply inflammatory processes, perhaps modified by the influence of scrofula. In the Strassburg hospital, thirty five cases of well marked local affections of this kind (fifteen of which were in children) had been completely cured. Another reason for assuming that these cases were not tuberculous was the fact, that in no one case was there any history of hereditary tendency. And the chief importance was attached by Cohnheim to heredity as a sign of true tuberculosis; less, however, by König and Schüller. Further, the fact that in children such processes frequently recede without any care being taken in the treatment, or remain for many years without becoming generalised, shows that they have nothing to do with tuberculosis, or, at least, that the danger of general infection of the organism from a primary focus has been much exaggerated. The good results obtained in England and America in the expectant treatment of such affections are well known. In concluding, Dr. Sonnenburg referred to the discovery of miliary nodules, containing giant-cells, in simple granulation-masses; he had found them, for instance, in the over-luxuriant granulations in a case of complicated and badly healed fracture of the leg.

The Anatomy of Hare-Lip.—Herr Kölliker (Halle) had examined into this subject, in consequence of Albrecht having described an 'intra-incisor cleft', and so shaken the prevailing doctrine that hare-lip is the result of failure in the union of a so-called intermaxillary bone with the upper jaw. By macerating skulls of embryonic pigs in a 10 per cent. solution of caustic potash, he found that, at the ninth or tenth week of fœtal life, there was a distinct intermaxillary bone. In the youngest embryos, two intermaxillaries could be recognised, which afterwards united. In human embryos of the seventh or eighth week an intermaxillary bone was recognised; so that, notwithstanding Albrecht, there could be no doubt of its existence. No conclusion as to the position of the bone could be drawn from the number and arrangement of the teeth. There might be five incisors on the intermaxillary bone; and an accessory incisor might be present in the upper jaw, without any abnormal formation of the intermaxillary.

Extirpation of the Uterus through the Vagina.—Dr. Martin (Berlin) related the histories of twelve cases in which he had extirpated the uterus through the vagina. In three cases, the cervix uteri was alone affected; in eight, it was much enlarged and softened; in three, there was adenomatous growth with cancerous masses in the uterine mucous membrane, which caused severe hæmorrhage. In four cases only had the uterus retained its normal mobility. As the organ could generally not be drawn down, Dr. Martin operated *in situ*. After irrigating the vagina with a lukewarm solution of carbolic acid, he made an opening into Douglas's space, and fastened the peritoneum by suture to the edges of the vaginal wound. He then made an anterior incision, separated the uterus from its bed of connective tissue as far as its middle, and tilted the organ backwards by means of a hook. This was done more easily when the uterus was made to glide over a spatula introduced into Douglas's space. The broad ligaments were now tied and divided, and the urinary bladder was set free. The hæmorrhage attending this proceeding was very slight. The separation of cancerous nodules from the parametrium was not difficult. In four cases the operation was not completed, in consequence of the great extent of the disease and of the existence of inflammatory adhesions of the uterus in front. In one only was there slight injury of the urinary bladder. The ureters were not injured. A drainage-tube having been introduced into Douglas's pouch, the wound was left open, and the vagina was plugged with salicylated cotton-wool and irrigated on the second day. Of the eight cases in which the operation was complete, six recovered.—Dr. Olshausen, in speaking of the vaginal method of extirpating the uterus hitherto employed by him, expressed the hope that it would almost entirely supersede Freund's operation. The latter had only one advantage, that it allowed the extirpation of the lymphatic glands. He objected to Martin's operation *in situ*, that it almost entirely prevented the ligature of single vessels, and rendered manipulation very difficult.—Dr. Mikulicz expressed a general approval of Dr. Martin's operation, but disapproved of opening the peritoneal cavity. If, however, the surgeon desired to do this, the method of permanent irrigation formerly recommended by him should be used.—Dr. Martin explained that he had met with no insuperable difficulties in operating *in situ;* in cases of necessity, where the vagina was too narrow, the operation might be preceded by a division of the perinæum.

Transplantation of Bone-Marrow.—Dr. P. Bruns (Tübingen), in a paper on this subject, said that all previous experiments, lately repeated by Maas in order to remove doubt as to the existence of an internal callus and, therefore, as to the power of the marrow to form bone, are of no special value, because the co-operation of the periosteum has not been excluded. The narrowing produced by Wegner by means of feeding with phosphorus, and the obliteration of the medullary cavity shown by Busch to follow the injection of mercury, perhaps only show that certain specific irritants are capable of exciting an ossifying power in the marrow, just as formation of bone occurs in certain circumstances in the connective tissue, muscles, and testes. The transplantation of bone-marrow in a manner similar to that in which the ossifying property of periosteum is called forth, has, according to Ollier, Maas, and Guyot, produced no positive result. Dr. Bruns repeated these experiments with the same negative result, so long as he followed Guyot in transplanting portions of bone-marrow from one animal to another. Similar absorption of the marrow was the usual result. But when he inserted a portion of a dog's bone-marrow under the animal's skin, bone was generally formed. Of nineteen experiments, seven failed; three from suppuration, and four from absorption. At the end of fourteen days there was

felt, at the part where the transplantation had been made, a nodule consisting of several centres of ossification, which at the end of twenty days had grown together. This is double the time usually required for ossification by the marrow within the bone. In the course of the first ten days the fat and medullary cells were replaced by granulation-cells, which soon became fusiform. At the periphery, isolated patches of osteoid substance were formed, and, less frequently, hyaline cartilage. In a later stage, numerous giant-cells appeared, which appeared to act as osteoblasts in producing the gradual absorption of the bone-substance. The yellow marrow of adult animals behaves almost in the same way as the embryonic red marrow. According to Dr. Bruns, ossification by osteoblasts occurs especially in young bones. These arise, according to Waldeyer, also from the giant-cells of the normal marrow, but not from the leucocytes and fat-cells. Such ossification as that described above is, however, only to be expected when, in spite of the rough treatment to which the portions of marrow have been subjected in their preparation, they rapidly form vascular adhesions with the surrounding parts.—Dr. Baum, in operating in a case of false joint in the tibia with a defect of bone two or three centimètres (about an inch) in length, had endeavoured to ascertain whether a portion of spongy bone-substance deprived of its periosteum was capable of healing. Following Nussbaum's plan, he loosened a portion of one of the fragments, leaving it attached only by a bridge of the soft tissues, thereby depriving it of its peritoneal covering; he then introduced it into the defect, applied an occlusive bandage, and, at the end of four weeks, was surprised to find the pseudo-arthrosis cured.

The Surgical Importance of the Subcutaneous Veins of the Abdominal Wall in Man.—In consequence of the deficiency of our knowledge as to the relations of the veins of the abdominal wall, and especially of their valves, Dr. Fenwick (London) injected these veins from the arteries with Berlin blue, in the case of a man who had died from hæmorrhage. The following were the most important results. The long venous trunks which run subcutaneously at the sides of the abdominal wall, have a neutral middle portion, without valves; while both terminal portions are provided with numerous valves arranged in opposite directions. Hence these cannot act as collateral channels for the femoral vein and vena cava; in cases of obliterations of the vena, this function is rather performed by the azygos vein. The neutral middle portion receives blood from the deeper parts of the abdominal wall. The intercostal veins between the mammary and azygos veins are also provided at their terminal parts with valves arranged in contrary directions. The veins in the round ligament are the collateral vessels to the portal vein. The author referred to two cases of extensive distension of the abdominal veins shown at Leipzig, which, according to the preceding observations, did not necessarily indicate obliteration of the vena cava or of the portal vein.

The Healing of Wounds of Cartilage.—Dr. Giess (Rostock) read a paper on this subject. There have been two opposite views as to the manner in which wounded cartilage is healed; that of Gurlt, that this takes place through fibrous, rarely bony, substance; and that of other observers, that it is by means of hyaline cartilaginous tissue. Dr. Giess had, under antiseptic precautions, injured subcutaneously the cartilage of the knee-joint in young dogs, and had watched the progress of repair from day to day at first, and afterwards at greater intervals of time. Direct primary union never took place; there was always at first a deposit of fibrin, which, however, disappeared about the seventh day. In the neighbourhood of the wound, the surface of the cartilages assumed a raw, ragged appearance; which was more distinct, the more the reactive process of proliferation (as in arthritis deformans) became prominent. Finally, according to Dr. Giess, the portion of cartilage affected in this way might be thrown off. He considered that it was improbable, that the defect afterwards became filled up through proliferation from the more deeply seated portions of cartilage.

A. HENRY, M.D.

(*To be continued.*)

REVIEWS.

The Elasticity and Tenacity of the Bones of the Human Skeleton. By O. MESSERER. Stuttgart: J. G. Cotta. 1880.

THIS work contains a record of numerous experiments on the bones of ninety subjects, with the view of ascertaining their tenacity under both flexion and torsion, and also their elasticity. The bones were perfectly fresh and undenuded of periosteum, and every means was taken to ensure the accuracy of the experiments.

In estimating the elasticity of the skull, the lower jaw, the thorax, and the pelvis, pressure was exerted in one series of cases transversely, in another series antero-posteriorly, until fracture occurred, the amount of yielding in each case being noted. The pressure was applied by means of two parallel flat surfaces, and, in the case of the skull, also by means of a bolt at one spot, and indirectly by means of the vertebræ.

1. Under transverse pressure, just before fracture, the skull diminished by 1-3rd of an inch in the transverse diameter, increased by 1-50th of an inch in the antero-posterior, and 1-40th of an inch in the vertical diameter. Under antero-posterior pressure, it diminished by 1-5th of an inch in the antero-posterior, by 1-70th of an inch in the vertical diameter, while, in the transverse diameter, it increased by 1-35th of an inch. For these measurements, a multiplying instrument was used, indicating accurately a change of 1-1000th of an inch. The average transverse pressure required for fracture was 1430 lbs., the average antero-posterior pressure 1140 lbs. The base of the cranium was the part usually fractured, and the line of fracture was invariably parallel to the line of the force applied. Pressure by means of a bolt at different spots resulted simply in perforation of the skull at these spots, the resistance not being proportioned to the thickness, owing to the ready yielding of the diploe. Pressure on the occipital protuberance caused generally an antero-posterior fracture of the base. Pressure indirectly through the vertebræ usually crushed in the occipital condyles, along with the sella Turcica and one or both petrous portions of the temporal bones. The average pressure required was low, amounting to 600 lbs., and no change was discernible in the various cranial diameters.

2. Transverse force applied at the angles of the lower jaw produced an approximation of 2-5ths of an inch, with fracture at or near the symphysis, on the application of 130 lbs. Antero-posterior pressure from the symphysis to the condyles produced a

separation of the rami by somewhat over ½ an inch, with fracture at the condyle on the application of 375 lbs.

3. The viscera and muscles having been removed from the thorax, it was found that, in a male aged 24, the sternum could, with an antero-posterior pressure of 130 lbs., be laid on the vertebral column without fracture; otherwise fracture occurred at the neck of the rib, or at the costo-sternal articulation. With transverse pressure, the transverse diameter could be diminished a third, when fracture occurred either at the neck or in the middle of the rib.

4. The force required to crush the body of a vertebra increased from above downward, and, after thirty years, diminished with the age.

5. An average antero-posterior pressure of 550 lbs. on the symphysis pubis caused symmetrical fracture of the pubic bones. An average transverse pressure of 400 lbs. on the iliac crests caused gaping of the sacro-iliac joint; while an average transverse pressure of 640 lbs. applied on the level of the acetabula caused the pelvis to become oval antero-posteriorly and produced the double vertical fracture of Malgaigne, *i.e.*, a fracture of the pubic bones, and also of the sacrum.

6. The experiments on the bones of the extremities, of which only a few can be noticed here, were numerous and exhaustive. The humerus of a woman, 25 years old, fractured under a traction force of 1760 lbs., the femur under 3410 lbs. The male clavicle supported a crushing axial force of 420 lbs., the female clavicle 275 lbs.; the male radius a force of 740 lbs., the male ulna 520 lbs., the male femur 1800 lbs., and the male fibula 130 lbs. Fracture of the male patella was produced by an antero-posterior pressure of 1320 lbs. The flexion-elasticity of the fibula, measured by proportional extent of movement under pressure, is, as we should *à priori* expect, extremely high, being twice that of the radius, which stands next to it. The torsion-elasticity, again, of the fibula and of the radius, as measured by the angular rotation allowed without fracture, is almost the same, and stands considerably higher than that of the humerus and femur, which come next, the ulna having a very low torsion-elasticity, about one third that of the radius. The fracture under axial pressure nearly always took the form of a crushing of the extremities, while that from torsion was in all cases spiral, the thread of the spiral following the direction of the force. Flexion-elasticity was greatest at middle life, and diminished markedly as age advanced. The bones of the various subjects showed considerable variations, and, as would be expected from their smaller mass, those of the female skeleton, although having the same actual tenacity as that of the male, yielded to smaller forces. James Anderson, M.D.

The Venereal Diseases, including Stricture of the Male Urethra. By E. L. Keyes, A.M., M.D. Pp. 348. New York: William Wood and Co. 1880.

This book is one of a series published under the title of 'Wood's Library of Standard Medical Authors', intended especially for the use of the general practitioner. Consequently, Dr. Keyes states that his aim has been 'to present the various venereal diseases as clearly as possible, avoiding such unnecessary refinement upon theoretical and mooted points as would be apt to lead to confusion or to error'. The first part of the book treats of the local venereal ulcer or 'chancroid', which the author considers to be entirely distinct from syphilis; in other words, he is a *dualist*, according to the sense in which that term is now understood. Further, he looks upon chancroid as being a distinct morbid entity, always due to contact of the surface involved with the pus of a similar ulcer; thus, he is directly opposed to the view advocated by Bumstead and Taylor in the latest edition of their well-known work, viz., that a chancroid may arise, under certain circumstances, from inoculation of the products of inflammation either simple or syphilitic. The description, diagnosis, prognosis, and treatment of chancroid, are all fully discussed.

Syphilis is next considered, and the several stages of the disease are well and clearly described. It is, however, with regard to the treatment of syphilis that Dr. Keyes has a special claim to be heard. The results of his careful researches into the action of mercury on the blood were published several years ago. The chief and most important conclusion arrived at was that mercury, when administered in small doses, is a tonic, and causes an increase in the number of the red blood-corpuscles, even when taken for a prolonged period. Thus, the author now treats his syphilitic patients on what he calls the 'tonic' plan, which may be briefly described as follows.

The preparation of mercury chiefly employed by the author is the protiodide in the form of granules, preferably those prepared by Garnier and Lamoureux of Paris, each of which contains about one-sixth of a grain. Unless there be any urgent symptoms which render more active measures necessary, treatment is begun by the administration of one granule after each meal for two or three days, when the daily dose is gradually increased by the addition of one granule every two, three, or four days, until some of the effects of mercury are produced. When diarrhœa occurs, or when the gums begin to be affected, the patient has reached his 'full dose'; and if this be continued he will suffer sooner or later, both as regards his stomach, and also in the quality of his blood. This full dose, therefore, which is not tonic, is only to be continued in case of necessity, or until the activity of existing symptoms has subsided; after which the tonic dose, which is equal to one-half or one-third of the full dose, is to be continued steadily for three years or longer, according to the special features of the case. If severe symptoms arise at any time during this course of treatment, the dose may be temporarily increased, or some other mode of introducing mercury may also be employed, until they have been removed.

In the last part of the work, which treats of gonorrhœa and its complications, stricture of the urethra is included, and the whole of the remarks on this part of the subject are well worthy of attention. Dr. Keyes protests strongly against many of the views of Otis and his followers, particularly as regards the normal dimensions of the urethra, and the necessity for cutting the so-called strictures of large calibre. The author is of opinion that there is no just measure of size for the urethra, and contends that all urethræ, healthy or unhealthy, will yield bands of irregular constriction to anyone who explores with a sufficiently large instrument; and that too, irrespective of the cure of any stricture which may have been cut, or of the symptom for which it may have been cut.

Dr. Keyes may fairly be congratulated on having produced a book which is a valuable addition to the

literature of venereal diseases, and one that will, no doubt, fully answer the purpose for which it has been written. ——— ARTHUR COOPER.

A Manual of Diseases of the Throat and Nose. By FRANCKE HUNTINGDON BOSWORTH, A.M., M.D. Lecturer on Diseases of the Throat in the Bellevue Hospital Medical College, etc. New York: D. Wood and Co. 1881.

MANY useful works have been published on the throat, but a complete treatise on the subject is still a desideratum. The present book, which also includes diseases of the nose, certainly does not supply this want; indeed, the author states in his preface that it was not his design to prepare a complete thesis on the diseases of the throat, but rather to describe those affections met with in ordinary practice. But as this has been already done in the many publications which have from time to time appeared on the throat and nose, as well as in several of the standard works on medicine and surgery, we do not see the necessity of publishing the volume now before us in its present form. Some affections are omitted altogether; and some receive but a scanty notice. Others, again, are treated of at very considerable length. 'This,' says the author, 'I have done designedly, with the object of introducing personal views and methods of treatment, which are not given in other works, and which I regard as worthy of consideration.' It is a pity that the author did not publish these original observations in a separate form, as, scattered as they are now through the 424 pages of this book, they seem to us to run the risk of not being read at all. Several of the chapters, under any circumstances, might have been omitted, as for instance, those entitled 'Mucous Membranes', and 'Taking Cold'. The former of these was originally written several years ago, as introductory to a course of lectures given by Dr. Bosworth, at the Bellevue Hospital Medical College. It treats of the structure, physiology, and pathology of mucous membranes in general. 'It was introduced,' says the author, 'under the belief that a clearer understanding of the diseases of the upper air-passages will hereby be attained by such as may not be already familiar with the subject of the chapter'. We quite agree with Dr. Bosworth that such a knowledge is essential for the correct appreciation of the diseases of the mucous membranes of the larynx and nose, as it is for the diseases of other mucous tracts. But surely a general description of the anatomy and physiology of the mucous membranes of the body in general is as much out of place in a special thesis on the throat and nose, as would be an account of the structure and function of serous membranes in a work on diseases of the testicle or heart. We can hardly conceive a practitioner taking up the study of a special organ without a previous knowledge of the structure and function of its individual tissues, much less of those of the body in general. Moreover, this chapter contains nothing with which a third year's student should be unacquainted. Indeed, the author states in a foot-note, unnecessarily we should think, that he pretends to no original research on the subject, as the bulk of what he has written is compiled—a remark which we venture to suggest he might also have applied to nearly the whole of the book. His chapter on the use of the laryngoscope, and the methods of using various instruments, do not call for special remark. His descriptions of the anatomy of the larynx and nasal cavities are inaccurate, as well as incomplete. The various diseases are fairly well described, and some original observations and useful hints are occasionally given, the author showing a considerable knowledge of recent observations in his specialty. The book is abundantly illustrated with woodcuts, the majority of which, however, have been taken from other works. The literal inaccuracies are numerous: among them, we may call attention to the use of 'ciliæ' for 'cilia'. Although, in the interests of the profession, we have felt ourselves bound to criticise this book somewhat severely, we do not wish to ignore the fact that it contains some observations of much value, and we can only regret that the author did not, as we before suggested, publish them in some of the many periodicals in general circulation.

W. J. WALSHAM.

A German-English Dictionary used in Medicine and its Cognate Sciences. By FANCOURT BARNES, M.D.Aberd., M.R.C.P.Lond., etc. Pp. 300. London: H. K. Lewis. 1881.

THE increasing importance of a knowledge of German in medical study has created the want of a dictionary of technical terms such as Dr. Fancourt Barnes' book is put forward to supply. It is not the only work of the kind before the public, but is the latest and most complete. The author confesses his obligations to such works as Littrè, Robin, Tollhausen, Blackley, Friedländer, and others, including the nomenclature of diseases of the Royal College of Physicians, and a more recent American dictionary of German medical words by Dr. Cutler, as well as Palmer's *Pentaglot Dictionary*, one of the earliest as well as chief sources of those since compiled. Such a book can of course lay no claim to originality, and must of necessity be made up from similar lexicons of words in which there cannot possibly be a copyright; and the one which is the most complete, and, at the same time, most accurate, is the most valuable. The volume before us, containing, as it does, several thousand words more than its predecessors, would seem to occupy this position. It will always remain a question what words should or should not be admitted to such a dictionary; and it is doubtless very difficult to draw the line at strictly technical words, and probably the margin might, in this case, have been slightly relaxed with advantage, with, perhaps, a more comprehensive rendering of some of the words. The author invites the communication of omissions or corrections; and, since most students have been compelled to prepare for themselves some such list, these ought to be forthcoming. As it stands, it will afford most valuable help, and a great saving of time, to all engaged in the perusal of German medical literature. W. H. ALLCHIN, M.B.

Dysmenorrhœa, its Pathology and Treatment. By HEYWOOD SMITH, M.D. Oxon., Physician to the Hospital for Women, and to the British Lying-in Hospital. London: J. and A. Churchill. 1881.

IN this work, Dr. Heywood Smith has endeavoured to point out the propriety of considering dysmenorrhœa as a symptom not only existing, but also pathognomonic in many disorders of the organs of reproduction in the female, and the necessity, not only in this particular symptom, but more especially the various diseases of which it is only a symptom. In discussing membranous dysmenorrhœa, the author recognises only the decidual form, and as a final resource in the treatment of obstinate cases,

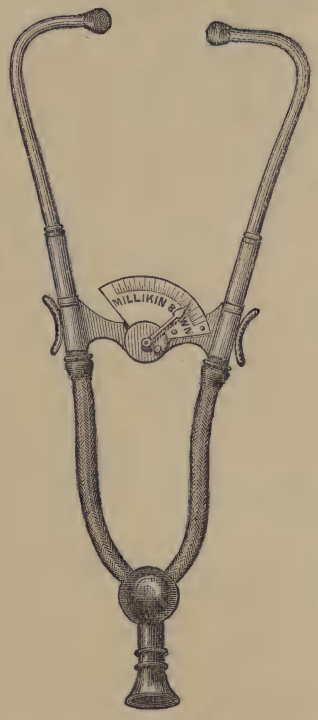
advises the introduction of a red-hot sound, made specially as part of Paquelin's thermo-cautery. The book contains chapters on ovarian, tubal, and uterine dysmenorrhœa, as well as on dysmenorrhœa resulting from diseases of the broad ligaments. It is full of sound practical advice, and is evidently the result of much close clinical observation.

FANCOURT BARNES, M.D.

NEW INVENTIONS.

AN ADDITION TO THE BINAURAL STETHOSCOPE.

The accompanying cut shows an addition to the ordinary binaural stethoscope, devised by Mr. Irwin Palmer. That instrument is thereby adapted for use as calipers, and the elastic band is replaced by a circular box-spring at the hinge. Attached to the joint is a dial-plate, which registers the divergence



of the two metal arms, thus at once enabling diametric and other measurements to be accurately and readily made without the addition of a separate instrument. It will commend itself to the profession for the facility with which it permits anatomical measurements to be registered, as, for example, in estimating the relative expanding power of the two sides of the chest in lung-disease, or the abnormal dimensions of rickety heads, etc. This idea has been very well carried out by Messrs. Millikin and Down, of St. Thomas's Street, London, S.E.

SOFT INDIA-RUBBER VELVET-EYED TUBES FOR MAKING THE INJECTION IN GONORRHŒA PAINLESS.

Dr. W. Thornton Parker writes, in the *Boston Med. and Surg. Jour.* of March 3, 1881, that 'to remove some of the difficulties encountered at present in the treatment of urethral inflammation, and to facilitate the injection of the urethra without pain, Messrs. George Tiemann and Company, of New York, have made for him some soft rubber velvet-eyed tubes with bulbs for making the injection painless'. The accompanying wood-cut gives a very good idea of the tubes.

They are about 2½ inches long, of three sizes, the bulbs corresponding with Nos. 13, 15, and 17, Tiemann and Company's American scale. They are made of pure India-rubber, soft and pliable. The movement to the right or left of the syringe in pressing out the fluid cannot cause pain, because only the tube *beyond* the attachment to the syringe is to be introduced; they are easily introduced painlessly, and compressing the penis about them to retain the injection is also painless. The bulbs have very thin walls. Dr. Thornton Parker finds these tubes excellent in practice, and very highly appreciated by those who have used ordinary syringes. They fit easily on the nozzle of almost any syringe. These tubes are packed nicely in a little box, and can be obtained by mail from Messrs. Tiemann and Cmpany.

MATHER'S PLASTERS.

MR. W. MATHER, of Dyer Street, Hulme, Manchester, has forwarded us samples of plasters of which we can speak in the most favourable manner. This firm has an old established reputation for their plasters, and it is fully maintained by the specimens forwarded to us. Their surgeons' India-rubber adhesive plaster is a most excellently-spread, even plaster on a strong elastic back, adapting itself well to the surface. The India-rubber porous plasters, the belladonna, capsicum, and ordinary strengthening plasters, are of excellent manufacture, most convenient and cleanly in use, and may be recommended with great confidence. Mather's improved mustard plasters are also very convenient: they are cut in a convenient size, spread on flexible cloth, do not peel or break, and are made of pure mustard: they keep well in foreign climates, and are extremely handy and efficient. These plasters are supplied in handy cases, in lengths of one yard or otherwise, according as they are needed for private or for hospital use.

PURTON SULPHATED AND BROMO-IODATED MINERAL WATER.

Purton water has been recommended by the late Dr. Brinton, Sir Ranald Martin, Dr. Marcet, and others; having been proved to be of value in hepatic disease, scrofula, in uterine disease, and other forms of glandular affection in which bromo-iodated water is indicated. In many respects, it represents the water of the Pierpont spa, but it is apparently superior in amount of iodine and bromine.

The London depôt is at Mansion House Chambers, 11, Queen Victoria Street.

PAPYROTILE TILES.

The Papyrotile Company, 14, Holborn Viaduct, exhibited, at the recent Exhibition of Building, etc.,

appliances, their papyrotile tiles for decorating walls, dados, ceilings, panels, etc.; also for the inlay of furniture, and many other artistic and useful purposes. The effect produced by the variety of specimens displayed at the company's stand was particularly attractive. The tiles vary in size from 4 to 8 inches, and are composed of a very tough material, called leatherette, in imitation of the grain of Morocco and Russian leather. They are easily fixed to the wall with glue or cement, and the only cleaning required is by simply applying a feather broom, which will effectually remove all dust or dirt that may adhere to the surface of the tiles. The appearance of warmth and comfort of this effective decoration, and the various designs in which they can be executed, must bring the papyrotile into general demand, as soon as it becomes more widely known.

MISCELLANY.

HOW TO CLEANSE, DISINFECT, AND PRESERVE SPONGES.—Mr. Charles Roberts, in the *Brit. Med. Jour.*, March 1881, p. 417, states, that the best mode of cleansing, etc., sponges, is to place them in strong salt and water, to which a little iodine has been added. A bath sponge, thus treated, has the pleasant sea-side smell attributable to the presence of ozone.

BANE AND ANTIDOTE.—Since vitriol-throwing has become a common offence, it may be well to point out that, in a case which occurred during a chemical lecture, mentioned in the *Pharm. Jour.*, in which two students were seriously injured in the face by the explosion of a flask containing boiling sulphuric acid, the intense suffering at first experienced ceased entirely about a quarter of an hour after the application of a soft paste of calcined magnesia and water, in a layer about two millimètres in thickness. M. Alande states that the magnesia requires to be renewed in twenty-four hours, but that patients, after recovery, retain no marks of the accident.

THE DIAGNOSIS OF BLOOD-STAINS BY MEASURING THE BLOOD-CORPUSCLES. — Dr. H. Struve (Virchow's *Archiv*, Band lxxxiii, Heft 1) comes to the following conclusions as to the practical value of the rules laid down for the detection of blood-stains by measuring the blood-corpuscles. 1. Great variations exist in the size of the blood-corpuscles. 2. In fresh blood, under the cover-glass, the blood-corpuscles undergo rapid contraction. 3. In blood dried in thicker layers, more or less shrinking of the corpuscles takes place. 4. When dried blood is treated with strong liquor potassæ (30 to 35 per cent.), the whole of the corpuscles do not reassume their normal size; some swelling of the corpuscles undoubtedly follows. 5. When dried blood is treated with carbonic acid and water, the envelopes of the blood-corpuscles and the granular cells remain undissolved, so that they may be recognised by the microscope, and, in particular cases, may be measured. 6. Measurements of single blood-corpuscles, which are made visible from dried blood by various similar reagents or treatment, permit of no positive conclusion as to the origin of the blood.

THE ADMINISTRATION OF SALICYLIC ACID.—A pleasant and agreeable method of administering salicylic acid is given in the *New York Medical Herald*. Take of Oswego corn starch one tablespoonful, to be thoroughly rubbed up in several ounces of cold water. Add a quart of milk, set on the fire, and stir until the mixture has boiled sufficiently to become homogeneous. The addition of sugar and essence of vanilla or lemon will give a delicious blanc-mange. Twenty grains of the salicylic acid can be rubbed up in a mortar with a cupful of the blanc-mange, which may be eaten warm or cold. The acid taste is entirely disguised, and a medicine irritating to a healthy stomach can be safely administered in combination with a nutritious but light food to such patients as are in need thereof.

PERMANENT PICTURES ON THE RETINA.—The idea that the circumstances attending the sudden and violent death of an individual might be ascertained by an examination of the retina—amounting, perhaps, in criminal cases, to a revelation of the perpetrator's identity—was discussed soon after the discovery of the visual purple. The matter is still often mentioned by the laity, and Dr. W. C. Ayres, of New York, in an article upon the subject in the *New York Med. Jour.* for March (*Specialist*), gives as much of the photo-chemistry of the retina as will suffice to establish the impracticability of detecting a murderer by means of an 'optogramme', as a general thing. After describing the details of the process of obtaining an optogramme experimentally upon animals, the author gives an amusing account of an attempt of his to make a picture of Professor Helmholtz upon the retina of an animal. The result was, an image of Helmholtz's shirt-collar and the end of his nose.

THE PRESENCE OF BACTERIA IN THE AIR. — A large series of experiments on the suspension of bacteria in the air, carried on at Breslau, by Dr. Miflet of Kiew, under the superintendence of Professor Cohn, have led to the following results. 1. A number of bacterial germs, capable of germination, are suspended in the air. 2. By means of an apparatus constructed for the purpose, and which is fully described, the germs may be collected, made to germinate, and systematically determined. 3. The larger number of germs thus detected in the air were those of micrococci and bacilli. Most of those were already known as growing in other media; some were of very peculiar and hitherto unknown forms. 4. Many bacteria, on the other hand, ordinarily found in fermenting substances, were not detected in the air. This is true, especially, of bacterium termo and the ordinary ferment of putrefaction, spirillum, spirochæte, and some others. 5. The presence of bacterial germs was, in some cases, proved in air absorbed from the soil. 6. The air, on the other hand, from the typhus-ward of an hospital was found to be free from living bacterial germs, probably in consequence of ventilation and disinfection. 7. The air from a sewer was rich in such germs. 8. The number of these experiments was not sufficient to determine whether the difference between the bacteria collected from the air in different places, and especially in certain localities, has any pathogenetic significance; the results, at present, being negative.

CULTIVATION OF CARDAMOMS.—The cultivation of cardamoms is, according to Mr. Markham, carried on to a great extent on the western slopes of the Coorg Mountains. In the month of February, the Coorgs start from their villages, and, arriving on the mountain slopes, select one of the largest trees, giving a preference to those on a western or northern slope. Around this selected tree they raise a platform, and commence to fell it. In felling it, they take care that it shall fall towards the base of the slope, and thus, in its fall, carry all before it. Having cleared a space of about 300 feet long by 40 feet broad, and freed it from all brushwood, they commence planting. In three months the plants begin to appear; after about twenty months, the plants have reached a height of five feet, and in six months later, that is, twenty-six months after the first sowing, the first clusters of flowers begin to appear. During this period the ground is kept constantly cleared of all weeds. Six months (October) after flowering, the first crop is ready for picking, but a full crop is not obtained till the following year. These plantations are kept up for six or seven years, when, the soil having become exhausted, fresh ground is again cleared. The harvesting is attended with some amount of suffering, as the grass which springs up around the cardamom plants cuts like a knife, and large leeches are very abundant. The capsules, when picked, are packed in bags and carried to the villages, a distance, frequently, of ten to twelve miles. Some families have been known to collect cardamoms to the value of 600 to 1,000 rupees per annum.

The London Medical Record.

CHARCOT AND RICHER ON NEURO-MUSCULAR SUPEREXCITABILITY DURING HYPNOTISM.*

MM. CHARCOT and RICHER draw attention to the phenomenon of exaggerated excitability of the nerves and muscles during certain forms of induced sleep. This phenomenon includes (1) great increase in the tendon-reflexes; percussion on a tendon giving rise to movements not only in the same limb but in the others, to sharper reflex contraction, to prolonged contraction, and to permanent contraction; the contraction may be brought about by kneading, friction, or simple pressure; (2) increased nervous excitability; pressure on nerve-trunks giving rise to spasm of the muscles to which their branches are distributed; (3) increased muscular excitability; pressure on a muscle causing it to contract; (4) a special increased excitability of the muscles of the face, which cannot be thrown into permanent spasm, but may be excited in any of the foregoing ways, and even by simply pressing each one with a small piece of wood, by which means they reproduced most of the experiments of Duchenne of Boulogne, on the partial action of the muscles of the face under the influence of localised faradisation.

The contraction resulting as above described is generally very intense, resisting the most forcible efforts to overcome it, but it may be made to yield, without force, by simply stimulating in the same manner the antagonist group of muscles. When the contraction is not destroyed during the hypnotic sleep, on awakening the patient, the contraction may disappear with the sleep; or it may persist after waking, if we render the patient cataleptic and awaken her during that state; or it may in some cases persist whether the patient be awakened during either the lethargic or the cataleptic state. Such persistent contractions resemble those of hysteria; and for their reduction it is necessary to hypnotise the patient again, and then to excite the antagonist muscles.

The transference of artificial contraction by means of the magnet is well known, since the experiments at the Salpêtrière in 1878; but it was not known whether such transferred contraction affected exactly the same muscles as were involved in the primary contraction. One of the patients of MM. Charcot and Richer having been hypnotised, and her muscles completely relaxed, the ulnar group were stimulated by touching the right ulnar nerve at the elbow, and a magnet was then applied to the left arm, the muscles of which remained relaxed; at the end of two or three minutes the fingers of the contracted hand began slowly to open, while those of the opposite hand began to assume the position they were quitting, until the contraction was completely transferred. The same result followed when localised contraction was induced by exciting a tendon or the muscle itself.

Anæmia of a limb produced by Esmarch's bandage prevents the manifestation of contraction, so long as the anæmia persists, but as the blood returns to the limb the contraction shows itself. In the former stage, therefore, it may be considered to be latent. This latent contraction may also be transferred by the magnet; so that, while in the bloodless limb no contraction results from exciting the nerve, a magnet applied to the opposite arm develops in it the spasm of the ulnar group of muscles.

ROBERT SAUNDBY, M.D.

* Contribution to the study of Hypnotism in Hysterical Patients. The Phenomenon of Neuro-muscular Superexcitability (*Le Progrès Médical*, Nos. 15, 16, 1881).

MOOS AND BÜRKNER ON DISEASES OF THE EAR IN RAILWAY EMPLOYÉS.

PROFESSOR MOOS of Heidelberg has drawn attention to this subject in an important paper read before the International Otological Congress at Milan in September last (see *Archives of Otology*, Dec. 1880). The author has thus far seen ten cases of marked disturbance of hearing in engineers and firemen. He gives particulars of four cases of locomotive engineers thus affected, the disease in all four being of the nature of the sclerotic form of catarrh of the middle ear. Case 2 strikes us as one of the most interesting; we therefore give a brief account of it. J. K., aged 47, has been a locomotive engineer for many years. During the last two years his hearing has become much affected from travelling through tunnels. He has had frequent colds, accompanied with pain, roaring, and ringing, in both ears. Subjective noises and deafness are always worse after a journey on the engine. In the right membrana tympani, the light spot is absent, the mucous layer is opaque, with a small atrophic spot beneath the handle of the malleus. In the left membrana tympani, the light spot is absent, the vessels of the manubrium are injected; there is partial radiating opacity in the anterior inferior quadrant. Bone-conduction is still present on both sides for the acouometer, which cannot be heard by aërial conduction; it is also absent for high tuning-forks, but present for the low fork. Voice is heard at a distance of one mètre. The author, who gave an opinion that the man was hard of hearing, was at the time quite ignorant why he had been asked for his opinion on the case, but heard subsequently that the patient had caused a collision, doing considerable damage. Dr. Moos doubts not that his opinion saved the man from a penalty, and hopes that, instead of being discharged, he received a pension, which, in the author's opinion, he justly deserved, as his hearing was damaged while he was on active duty.

The paper terminates with eight conclusions on the subject, which are of so much practical importance that we reproduce them in full.

I. Locomotive engineers and firemen are liable to affections of the ear, with noticeable decrease in hearing, usually on both sides, which may be attributed to their employment; these affections may, perhaps, appear earlier in those who are employed on railroads running through mountainous regions than in those on roads in level countries.

II. This acquired deafness appears to be more dangerous than colour-blindness as regards the signal code, because the latter is a *congenital* defect which can be defined precisely before the individuals are put on active duty, while the deafness is an *acquired* disease, slow in its approach and often unknown to the person affected until an accident, *e.g.*, a cold, or injury, diminishes the hearing more and more on one or both sides, or destroys it completely.

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III. The percentage of these affections of the ears can only be fixed by extensive statistics and examinations. The fact of their existence is evident; and even if the percentage were but slight, it is of great importance, for even a single exception may cause danger.

IV. The ears should be examined very carefully before a certificate of fitness for duty is given; the examination can and should only be undertaken by a physician who has made a special study of otology, or, at least, understands how to examine the ear and to test its functions accurately.

V. When a man has acted as fireman for a long time, his promotion to the position of engineer should demand special precautions in this respect.

VI. When his definite appointment has been made he should be warned that his occupation may injure his hearing, and that he should present himself for examination when he notices the slightest defect in this respect.

VII. The physician should be sworn to report every case of deafness in firemen or engineers to the superintendent of the road.

VIII. The hearing of engineers and firemen should be tested at least once in every two years, so as to avoid all possible danger; perhaps oftener in those who run on tunneled roads.

After the discussion of Professor Moos's paper at the above meeting, a resolution was passed drawing the attention of the governments of different countries to the frequency of certain affections of the ear in engineers and firemen, which may prove a source of danger to the travelling public. Railways not being in the hands of the Government in this country, this subject has not yet come under the notice of our railway authorities. It certainly deserves their full attention.

A further contribution to the subject is made by Dr. Bürkner of Göttingen, in a paper in the *Archiv für Ohrenheilk.*, for Feb. 1881. This author has observed affections of the ear in six locomotive engineers, in two firemen, and in sixteen other railway *employés*. Whilst agreeing, on the whole, with Moos's conclusions, he considers that the condition of the ears of other railway *employés*, especially pointsmen and porters, should also be taken into account. He quite agrees with Moos in the importance of drawing the attention of the authorities to the subject, and in his statement that even exceptions would suffice to expose the travelling public to great danger.

E. CRESSWELL BABER, M.B.

BEHREND ON THE TRANSMISSION OF SYPHILIS BY INHERITANCE.

IN a paper on this subject, published in the *Berl. Klin. Woch.*, 1881, Nos. 8 and 9, Dr. Behrend of Berlin considers the two following questions. 1. Does a healthy woman become infected during gestation by a child which has derived syphilis from the father? 2. Is syphilis, acquired by a mother during pregnancy, transmitted to her fœtus *in utero*, or not? These two questions resolve themselves into one, namely, whether the syphilitic poison can pass by way of the placental circulation. To illustrate one part of this question, the following cases, in which the mother acquired syphilis during her pregnancy, are related.

CASE I. Mrs. T., aged 24, consulted Dr. Behrend on August 18th, 1874, for an affection of the genitals, which she had first noticed about eight days previously. She was then in the ninth month of pregnancy, and had last menstruated at the end of Dec. 1873. On examination, the author found condylomata of the labia, a small superficial induration on the left nympha, commencing roseola of the trunk, crusts on the scalp, swelling of the superficial lymphatic glands, especially of those of the groin, and catarrhal pharyngitis. The patient said that her husband had suffered from 'piles' for some time. The author concluded that contagion of the wife had probably occurred about the beginning of June. The symptoms disappeared under mercurial inunction; and, on September 13th, the patient was delivered of a full-grown female child. On the following day, both mother and child were examined, and found to be free from signs of syphilis, but, in the third week, condylomata appeared around the child's anus. These were dispelled by fifteen mercurial baths. On January 24th, 1876, the child had a purulent discharge from the nose, hoarseness, and laryngeal stridor. Under mercury the child recovered, and has remained healthy up to the present time.

The father was examined immediately after the birth of the child, and was found to have condylomata of the anus, swelling of the lymphatic glands, and alopecia. He said that, four months after his marriage (April 1874), he had had extramarital intercourse, followed in three or four weeks by an ulcer of the frænum præputii, which was said by his medical attendant to be a hard chancre. Both husband and wife had relapses in January 1875. A healthy child was born in 1877.

CASE II. Mrs. W. came under the author's care on November 9th, 1879, with ulcerating condylomata about the anus and external genitals, copious vaginal discharge, a general papulo-roseolar syphilide, mucous patches in the throat, crusts on the scalp, glandular enlargement, and alopecia. The patient had last menstruated on February 20th, and was, consequently, in the last month of pregnancy. She had first noticed a hard spot on the vulva at the beginning of August, and had been under medical treatment for a few weeks. The husband had been under the author's care in July for indurated sores of the penis. The mother's symptoms disappeared under mercurial inunction, and she was delivered on November 27th of a full-grown child, free from signs of syphilis. The child was not suckled by its mother, who was attacked with parametritis, and removed to the hospital. During the mother's absence from home the child was neglected, and died on March 2nd, 1880. On examination after death, Dr. Behrend found well-marked syphilitic lesions on the buttocks, limbs, palms, and soles. Both parents remained free from signs of syphilis during the child's life, but eight weeks after its death the mother had syphilitic sore-throat, which got well under treatment.

The author remarks that the foregoing cases, as well as two others, one by Maximilian Zeissl (*Allg. Wien. Med. Zeit.*, 1879, Nos. 50, 51), and the other by Vajda (*Wien. Med. Woch.*, 1880, Nos. 30, 31, 32), prove that the syphilitic virus can be transmitted by means of the placental circulation, though it may not be a necessary consequence in all cases. He thinks, however, that the escape of the child can only be proved in exceptional instances, and holds that, in most of the cases on record—those of von Bärensprung for example — in which the child is stated to have remained healthy, the period of observation was too short for syphilis to be excluded

with certainty. In support of this view, a case is quoted from Caspary, in which the first symptoms of syphilis were said to have been delayed until the child was between four and five-and-a-half months old. The author then reports a case, which came under his own observation, as one in which no signs of syphilis appeared until the eighth month. A child, eight months old, was brought to Dr. Behrend to be vaccinated, and, on examination, was found to be suffering from mucous patches of the anus. The mother had not noticed these patches, so there was really no evidence how long they had been present. Dr. Behrend, however, assumed from their condition that they had not been there longer than three or four weeks; and further goes on to assume that these mucous patches were the first appearance of syphilis in the child, merely because the mother had not noticed anything wrong; for nothing is said as to any medical examination of the child previously.

Again, two children over six months old, when brought to Behrend to be vaccinated, were suffering from condylomata of the anus, and were said to have been healthy up to that time. These cases are also put down by the author as instances in which the first symptoms of inherited syphilis appeared after the sixth month.

The possibility of escape of a mother who bears a syphilitic child is next touched upon, and a case is given in detail, which, in the author's opinion, shows that a mother of syphilitic children may herself remain free. Dr. Behrend had been the medical attendant of the family in this instance since 1873. His information previous to that time was obtained from the former medical attendant.

A lady, aged 27, of unimpeachable antecedents, married a healthy man in 1864. Six months afterwards the husband caught syphilis, and was treated imperfectly from time to time for various lesions till his death, which occurred in 1879 from amyloid disease. During these fifteen years of married life the wife remained quite healthy, never having had any eruption, osteocopic pains, or lesions of the mucous membranes or bones, nor had she suffered in her general health or appearance. During the first eight years after marriage she bore seven macerated fœtuses, all of which were born between the seventh and eighth months. In 1872 a living child was born, but it soon showed an eruption, and died in two months; in 1874 a living child was born with a pustular syphilide of the feet. This child recovered under mercury. In 1876 a healthy child was born, which still lives. In 1878 a boy was born healthy. A month afterwards a pustular rash appeared, and was followed by separation of the upper epiphyses of the bones of the forearms. The child finally recovered under mercury. Lastly, in September 1880, a healthy well-developed boy was born. He, however, subsequently had a rash, of which the nature was uncertain. Cases bearing on the point are also quoted from various authors, including Guibout, Ranke, and others. Dr. Behrend concludes that, while the transmission of syphilis may certainly occur through the placental circulation, it may yet fail to be so transmitted in some cases.

[It will be seen at once that the case just related only proves that no signs of syphilis were noticed in this mother of syphilitic children, and not that she escaped altogether. Indeed, everything goes to show that she was really protected, otherwise, how did she escape infection by any of the children who were born alive? It is true, we are not told whether the mother suckled these children (an important omission); but whether she did so or not, the intimate relations of a mother with her child would make it almost impossible that the former could have escaped had she been really free from taint. Thus, the case, though interesting as regards the general good health enjoyed by the mother during so long a period, is no exception to Colles' law.—*Rep.*] ARTHUR COOPER.

KELSEY ON THE DIAGNOSIS OF CANCER OF THE RECTUM.

THE *New York Medical Journal* for April contains an original communication from Dr. Charles B. Kelsey, on the subject of cancer of the rectum.

To the rule that this affection occurs in middle life or old age, there have been some interesting exceptions, one case having been reported, the subject of which was a boy aged twelve years. With regard to the relative frequency in the sexes, the author, in a collection of one hundred and seven cases, found fifty in males, and fifty-seven in females. The locality in which the disease first appears varies. According to Quain, the lower margin of the deposit is most frequently met with at the distance of from two to three inches above the anus. The upper limit of the rectum, where it joins the sigmoid flexure, is a common site of the disease; and here it runs a more rapid course than elsewhere, and is more apt to be suddenly fatal, on account of the increased liability to obstruction which the anatomical condition favours.

Of all the varieties of true cancer affecting the rectum that most frequently met with is epithelioma. It presents itself under two forms, that of lobulated epithelioma, commencing as a warty nodule near the verge of the anus, and then slowly involving the lower extremity of the rectum; and that—a much more frequent form—of cylindrical epithelioma, a soft, vascular, and rapidly growing deposit, which is developed within the rectum, and usually above the internal sphincter. Next to epithelioma, scirrhus is the variety of cancer most frequently met with in the rectum. This arises in the submucous connective tissue, and is said to be most apt to show itself first on the anterior wall of the rectum, near the prostate. The hardness and contractility of this form of disease are the chief clinical facts upon which a diagnosis rests; but, leaving out of consideration the history of the case, it will often be impossible to distinguish between the gross appearances of scirrhus and those of simple fibrous stricture. Encephaloid and colloid cancers have been met with in the rectum; and in a paper read in 1880, before the Société de Chirurgie of Paris, M. Nepveu gave the histories of ten collected cases of melanotic cancer. One case of osteoid cancer in the rectum has been recorded.

The symptoms of cancer of the rectum may be classed as follows:—pain; those due to contraction, to ulceration, to invasion of neighbouring parts; and lastly, the generalisation of the disease and cachexia. A cancer of the rectum may, and often does, begin so insidiously that its existence is not suspected till it has made irreparable progress. On the other hand, however, the disease is usually attended with great pain, and the suffering, in itself, may be of great assistance in diagnosis. The chief nerve-supply of the parts about the rectum and anus

is from the internal pudic, a nerve having intimate connections with the other nerves arising from the same portion of the spinal cord, and supplying the other pelvic organs and the lower extremities. This anatomical fact seems to explain the wandering and often anomalous pains which are very commonly present. Pain or cramp in the lower extremities, in cases of cancer of rectum is, as was pointed out by Hilton, a bad sign, and indicates a direct encroachment upon some of the neighbouring nerves, either through implication of the glands, or by direct extension of the original disease. The symptoms directly referable to contraction of the bowel are often slight, and differ in no way from those caused by the simple fibrous stricture of the same part. The one great sign of contraction of the rectum is constipation with occasional attacks of diarrhœa, in which large quantities of fæces are passed. The constipation is accounted for by the obstruction, and the consequent accumulation above the stricture; and the diarrhœa is secondary to the accumulation, which in time acts as a foreign body, and sets up catarrhal inflammation. Well-marked lessening of the rectal calibre does not necessarily produce a change in the shape of the fæces. The flattened, tape-like stool is a sign of value when present, and should always lead to careful exploration; but it may not be present even in the worst cases of stricture, and it may occur without stricture, being due to an irregular spasmodic action of the sphincters, or to pressure applied without the bowel. After a stricture has existed for a certain length of time, signs of obstruction will be manifest on abdominal palpation and inspection. There will be found to be fæcal distension of the transverse and descending colon, disappearing from time to time after attacks of diarrhœa, and preceded by eructations of fetid gas. It will sometimes happen that fatal obstruction will occur even though, as shown by *post mortem* examination, the calibre of the stricture was large enough to permit the passage of the finger. With the commencement of ulceration, there begins an entirely new train of symptoms. The hæmorrhage from an ulcerated rectum in cancerous disease is seldom profuse enough to be dangerous, though by frequent repetition it may become an important factor in the ultimately fatal result. Above the contraction there often develops an ulceration, which is due to irritation of fæces, and not to extension or breaking down of the cancer. As a result of this process, perforation of the weakened intestinal coat may take place at some distance above the stricture. When the cancer itself breaks down and ulcerates, its extension is limited by no tissue of the body. The bladder may be opened, and a permanent fistula result, in which case the passage is generally from that viscus into the rectum. There are two sets of lymphatics which may be involved in malignant disease of the rectum—one coming from the anus, and going to the glands in the groin; and one coming from the rectum, and going to the glands in the hollow of the sacrum and the lumbar region. The proper place to feel for glandular involvement or disease within the sphincter is along the spine, deep in the pelvis—a simple point, which may decide the surgeon for or against operative interference.

The diagnosis of cancer of the rectum from ulceration and stricture of any other variety must rest chiefly upon a physical examination. To make such an examination thoroughly, and yet safely, requires great care and gentleness, and, to properly interpret the conditions which may be found, no little experience and knowledge. Before a speculum is used the finger should be introduced, for in the majority of cases it is upon examination with the end of the finger that the diagnosis rests. In soft cancer, especially after ulceration, the diagnosis is generally easy; and in epithelioma, where the cancerous ulcer is found on an indurated base, the practitioner is not apt to make the mistake of considering the condition due to anything else except malignant disease. After the finger has appreciated the nature and extent of the disease, the locality of the constriction and its calibre, and any other points within its reach, the speculum may be introduced if possible and necessary. When the stricture is low down it may not be possible, and it is often unnecessary. The best form of speculum for examining the lower part of the rectum is Sims'; and if it be desirable to inspect as high up as possible, and beyond the reach of the blade of Sims' speculum, the best instrument is a small-sized cylindrical vaginal speculum, made a couple of inches longer than usual. The diagnosis of a stricture at the upper limit of the rectum, or in the sigmoid flexure, is attended with much difficulty. Cancerous disease in this locality is best searched for through the abdominal wall. The best bougie is the softest, and it should have a rounded or blunt end rather than a tapering point. All other varieties of bougie seem, to the author, to be inferior to that made of soft India-rubber. The rule of extreme caution in instrumental examination of the lower part of the intestine applies to all cancerous disease above the lower three inches and a half of the rectum, for beyond this point there is but one treatment, and that is the same, whether its exact upper limit be known or unknown. With the finger, we can tell whether extirpation or rectotomy is allowable; and if the disease be beyond the reach of these measures, there is but one point to be decided—whether colotomy should be done on the right or the left side; a point, Dr. Kelsey concludes, which can generally be settled without running the risk of a fatal perforation with an instrument. W. JOHNSON SMITH.

STIMSON ON SIXTY-TWO CASES OF ANEURISM TREATED BY THE ELASTIC BANDAGE.

DR. STIMSON has collected (*Amer. Jour. of the Med. Sciences*, April 1881) reports since Weir's first published case in 1875 of sixty-two* cases in which the bandage, or the India-rubber tubing, or both together, have been used for the cure of aneurism, mostly with very great success. With three exceptions (axillary, internal circumflex, and anterior tibial) the aneurisms thus treated were all of the popliteal or the femoral artery, and the great majority were popliteal.

* The following is a list of the sources from which the cases referred to by Dr. Stimson have been obtained:—Petit, *Bulletin Gén. de Thérapeutique*, 1878, pp. 458, 504, 543. Weir, *Am. Journ. Med. Sciences*, Jan. 7, 1879; *New York Med. Journ.*, vol. xxix, p. 520, and vol. xxxi, p. 637; *Archives of Med.* (New York), 1880, iii, p. 207. Gersuny, *Archiv für Klinische Chirurgie*, vol. xxiv, p. 798. The *Lancet*, 1875, ii, p. 448; 1876, ii, pp. 184, 461; 1877, i, p. 571; 1878, i, p. 86; ii, p. 880, and Sept. 28th; 1879, ii, pp. 81, 121, 238, 575; 1880, i, p. 289, ii, p. 608. *Transactions of Pathological Society of London*, vol. xxix, p. 72. *Transactions of Clinical Society of London*, 1879, vol. xii, p. 55. *British Medical Journal*, 1880, ii, p. 15. *Transactions Med. Soc. King's Co.*, New York, 1879-80, p. 223. *Australian Med. Journ.*, May 1879, p. 243. Bryant's *Practice of Surgery*, 2nd Am. ed., p. 324. *St. Bartholomew's Hospital Reports*, vol. xv, p. 75. *Centralblatt für Chirurgie*, 1879, vol. vi, p. 65. *Bulletins de la Société de Chirurgie*, 1880, p. 570.

The details of the method involve the retention of the bandage or tubing for one or two hours, and the compression of the artery by a tourniquet or the fingers for several hours afterwards. This compression should be firm enough to prevent the flow of blood through the artery; but after it has been kept up for an hour or two it should be temporarily intermitted, as Dr. Weir suggests, in order to ascertain if pulsation return in the sac. If pulsation return within a few hours after an apparent cure has been obtained, the artery must be again compressed for some time. The elastic bandage should not compress the aneurism, for the cure is to be effected by filling the sac with a clot; and if this clot be smaller than the natural capacity of the sac, it will be easier for the blood to make its way into the latter after the removal of the compression, and thus perhaps prevent a cure. If the primary clot have extended upwards into the artery, this of course is less likely to happen; but, as the surgeon cannot be sure that such extension will take place, it is prudent to act as if it would not. On the other hand, over-distension of the sac, as practised by Mr. Heath, seems unnecessary and perhaps even dangerous. The clot is in itself a source of irritation to the wall of the sac; and if this slight irritation be increased by extreme tension, it may pass beyond the degree which leads to tissue-production, and cause suppuration.

The introduction of needles or of a coagulating injection has been suggested, but never yet practised. It might be proper in a second application in those exceptional cases in which the first trial has not caused coagulation; but, as it involves a slight risk of suppuration, it will probably be thought advisable not to employ it in the first attempt.

BATTEY ON SCROFULOUS JOINT-DISEASE COMPLICATING PHTHISIS.

Dr. Battey, of Georgia, in a suggestive and able paper (*Trans. of Georgia Med. Association*, 1880; *Amer. Quarterly Jour. of Med. Sciences*, April 1881), reports a case of a young man, aged 20, who suffered for nearly a year with suppurative inflammation of his left knee, and who presented the physical signs of consolidation of the left lung, in the upper part of which a large cavity existed. Amputation was thought advisable, but was delayed by advice of a consultant, on account of the advanced disease of the lung. Finally, the patient called for amputation of the thigh to release him from the intolerable suffering, from which opiates had ceased to yield him relief. His condition was very unpromising, but the operation was performed in order to grant him euthanasia. Much to the surprise of his attendants, he made a rapid recovery; the appetite and powers of assimilation returned; his spirits improved; he slept without opiates; and in one month was out of doors on crutches. A year afterwards he had grown fat, had lost his cough, and was apparently fully restored to health, so that he was enabled to engage in business. After enjoying excellent health, and leading an active out-door life for over three years after the operation, one day he had an accidental fit of coughing while eating, which resulted in a fatal hæmorrhage of the lungs.

This case suggests discussion of the question, What is to be done with a scrofulous joint in consumptive subjects? Dr. Battey concludes that, if there be a prospect of prompt healing of the stump, amputation is the appropriate remedy. If this cannot be hoped for, the only course is palliation by evacuating pus, extending and immobilising the joint, and applying antiseptic dressings.

The consideration of this and other cases reported may perhaps elucidate an obscure point in the pathology of phthisis. It is evident, in many of these cases, that the fault lies to a great extent in the insufficiency of the powers of nutrition; primary and secondary assimilation being below par, and insufficient for the wants of the system, denutrition and wasting necessarily result. The question arises, If the ordinary means be insufficient to bring up the powers of assimilation to meet the demands of the body, would not reducing these exactions by a definite amount make the two factors more nearly correspond? The common observation, that after recovery from amputation of a large member the patient ordinarily develops fat, would certainly favour the affirmative view; and strong support of it is also apparently furnished by cases like those of Dr. Battey, even though it be admitted that the joint-disease may have preceded the pulmonary deposit. This consideration will probably never lead any surgeon to amputate a limb in order to cure phthisis; but, where a diseased joint brings up the question of operation, a certain amount of pulmonary disease would, if this view is correct, not merely be regarded as not a contra-indication, but, indeed, as an additional reason for performing the operation; for without it, an unfavourable termination of the case may be regarded as almost inevitable.

LANGENBUCH ON SUPRAPUBIC LITHOTOMY.

In a recent contribution on 'Lithotomy and Antisepticism' (*Archiv für Klin. Chir.*, Band xxvi, Heft 1, 1881), Dr. Carl Langenbuch of Berlin advocates the high (suprapubic) operation. In perineal lithotomy, the antiseptic method cannot be rigorously carried out, in consequence of the proximity of the anus, whilst in the high operation this method is applicable under very favourable circumstances. The risk of wounding the peritoneum in this latter operation is not so great as is generally supposed, since out of 478 cases of suprapubic lithotomy collected by Dr. Dulles, in thirteen only had this membrane been wounded, and of these three cases were fatal. It was shown also by the same author that any stone weighing more than two ounces could be moved with less risk by the high than by the perineal operation. This latter proceeding, however, in Germany, as in other countries, has long been almost exclusively favoured, high lithotomy having been resorted to in some few cases of very large and very hard stone.

The author considers whether this preference of perineal to suprapubic lithotomy can be supported by anatomical and physiological data and by clinical experience. Urinary infiltration of connective tissue, it is pointed out, is a danger common to both operations, which, however, in the suprapubic proceeding can be prevented. The danger of this infiltration, when it has occurred, is much less after the high than after the perineal operation, since the epicystic is more accessible and less confined than the periprostatic and circumrectal connective tissue, can be more readily incised and disinfected, and, as it is not connected with any large venous plexus, is less likely through its decomposition to set up general

septic infection. In the high operation, the incisions can be made carefully and precisely, and through structures that are freely exposed to view, and there is no necessity for forcible laceration and contusion of connective tissue and other soft parts. It may be said, the author suggests, that it is as difficult to set up urinary infiltration after the high operation, as it is to prevent such infiltration after lithotomy by the perinæum.

In the high operation, when successfully performed, the only structures that are incised are integument, cellular tissue, and the wall of the bladder; all which structures are capable, after healing, of performing their physiological functions. In perineal lithotomy, on the other hand, many vascular and glandular structures must necessarily be wounded, and some of these are liable to be permanently injured. The latter operation may, it is true, be very often considered as successful; the stone has been removed, and the patient recovers; but it cannot be denied that it is often followed by one or more of such results as urethral stricture, incontinence, impotence, urinary fistula, recto-vesical fistula. With regard to the danger of wounding the peritoneum in the high operation, it is stated by the author that the topographical conditions of the paracystic peritoneal fold in adults are not so unfavourable as is commonly supposed. Petersen of Kiel has shown by recent experiments on the dead body that, though the bladder is inaccessible when empty, yet, by the injection of water into this viscus and also into the rectum, the peritoneal reflexion can be elevated to an average distance of one inch and a third above the upper margin of the symphysis pubis. In a smaller series of experiments, Langenbuch has been able, by extreme distension of the bladder by injected fluid (800 to 1,000 cubic centimètres), to raise above the symphysis from two inches to three inches and a third of uncovered vesical wall. In some of these experiments, it is stated that the bladder was filled almost to the point of bursting. With this question two factors, one negative, the other positive, come into play. In cases of calculous impaction at the neck of the bladder, especially when the stone is large, it will often be found impossible to introduce any quantity of fluid into this viscus. On the other hand, there is no necessity for free incision into the bladder, since the vesical wall, unless much thickened, is very elastic, and a small orifice can be readily dilated by traction in different directions. Langenbuch concludes that in ordinary cases sufficient room can be obtained above the symphysis for the performance of the high operation, by injecting the bladder, or, if this cannot be effected, by distending the rectum.

The risk of wounding the peritoneum in the high operation is no reason, Langenbuch holds, for preferring perineal lithotomy in these days of antiseptic surgery, when many laparotomies are performed yearly with little mortality. Much depends on whether the peritoneum be wounded before or after incision of the wall of the bladder. In the former, no danger is likely to result if the operation be performed under antiseptic conditions, and if the opening of the bladder be postponed for a time, and until after the cicatrisation of the superficial wound. If the peritoneum be accidentally wounded after the vesical wall has been incised, then there is great risk of decomposed urine passing into the abdominal cavity and setting up fatal peritonitis.

For the removal of a large stone—one with a maximum diameter of about two inches—the safest proceeding, Langenbuch thinks, is the high operation performed in two stages, and under strict antiseptic conditions. To meet the case of a monster stone, measuring from four to seven inches in diameter, the extraction of which in the second stage of the high operation would probably cause much laceration of the recently healed superficial parts, and also of the peritoneal fold, he proposes a complicated proceeding. A description is given of a high operation in two stages. In the first stage, the anterior surface of the bladder is freed to some extent of its layer of peritoneum, and a plastic operation is performed on this membrane. In the second stage—that of extraction performed after an interval of from five to eight days—elaborate precautions are taken to disinfect the bladder.

Dr. Langenbuch does not undertake in this paper to discuss how far the indications for lithotrity might be modified by a general acceptance of his proposed antiseptic high operation performed in two stages, but points out that, in the first place, the invention and development of lithotrity are due to the dangers of lithotomy, and that, in the second place, the former proceeding, as is well known, is not free from danger, nor capable in every case of effecting complete cure. W. JOHNSON SMITH.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. BLACKERBY, J. M.—Oleum Lini in the Treatment of Phthisis Pulmonalis. (*Therap. Gaz.*, April 1881.)

2. Berberina. (*Indiana Med. Reporter.*)

3. BOMFORD, GERALD.—Aconite in Remittent Fever. (*Practitioner*, March 1881.)

4. TOTENHOEFER.—On the Treatment of Cholera Infantum with Resorcin. (*Breslau Aerztl. Zeitschrift*, 1880, No. 24.)

5. PETERSEN.—Iodoform and Musk. (*Petersburg. Med. Wochenschr.*, March 28.)

6. Oolachan Oil. (*Pharm. Jour.*, April 30.)

7. DUJARDIN-BEAUMETZ.—On the Properties of Waldivin. (*Comptes Rendus*, tome xcii.)

8. OLIVER.—On Barium in Medicinal Springs. (*Practitioner*, May 1881.)

9. KLEIN.—Atropin in Vaseline.

10. PARODI.—Xanthoxylum Naranjillo. (*Revista Farmaceutica*, vol. xviii.)

11. Artificial Carlsbad Salt.

12. BLACKWELL, E. F.—Compound Liquorice Powder. (*Med. Times.*)

13. DUMAS.—The Action of Aconitin in Neuralgia. (*Jour. de Thérap.*)

14. ROCHESTER.—Grindelia Robusta in Asthma. (*New York Med. Record*, May 1881.)

15. HOLLMANN.—Pepsine as a Solvent in Albuminous Obstruction of the Bladder. (*Nederland. Weekbl.*, No. 18.)

16. PLAYFAIR.—Artificial Human Milk. (*Brit. Med. Jour.*, May 21.)

17. FAIRTHORNE.—On Ammonium Bitartrate. (*Amer. Jour. of Pharm.*)

18. ZANDER.—On Hydrochloric Acid for Chlorosis. (Virchow's *Archiv*, Band lxxxiv, Heft 1.)

1. *Blackerby on Oleum Lini in the Treatment of Phthisis Pulmonalis.*—Dr. Blackerby (*Therap. Gaz.*, April 1881) has for many years employed linseed-oil in the treatment of phthisis, not only with great satisfaction to himself, but with great benefit to his patients. He knows of no remedy that does so much good in this terrible disease. He prescribes a mixture consisting of equal parts of linseed-oil, honey, and whiskey; a tablespoonful to be taken three times a day. He gives details of two cases, and speaks in general terms of many others in which the results are said to have been most striking. [This is an amusing paper, and might even be called suggestive; but, speakingly accurately and from a scientific point of view, it is destitute of value. It evidently expresses a general impression, the result of some years' experience in practice, and it is not to be denied that such testimony may, under certain circumstances, be utilised. It can hardly be supposed, however, that linseed-oil can cure consumption. Probably the most it can do is to give relief in simple bronchial catarrh. For the slight cough, which often remains for years after consumption is practically cured, the following receipt will be found useful. *Linseed Jelly.* Half a pound of linseed (the brown seed) to three pints of cold water. Let it simmer (not boil) for two hours, then strain, or rather squeeze through muslin. When cold it will be in a jelly mass: sweeten and flavour to taste. A breakfast-cup of the jelly once a day, or oftener if necessary, with the juice of one lemon in it.—*Rep.*]

2. *Berberina.*—We have it on the authority of the *Indiana Med. Reporter* that berberina is extensively prescribed as a tonic in myalgia and muscular debility, in convalescence from fevers, jaundice, hepatic derangements, and in diarrhœa and dysentery. It is said that it invariably imparts tonicity to muscular fibre, and that in all cases where there is relaxation and want of tone, it may be unhesitatingly prescribed. It is sometimes administered in the form of syrup in combination with iron. [Berberina or berberin was first discovered in the common barberry, and has since been found in Hydrastis Canadensis, and in various other medicinal substances, especially in those combining a bitter taste with a yellow colour, as calumba, coptis, and podophyllum. Some account of its properties will be found in an article on 'Hydrastis and Hydrastin' in the *Brit. Med. Journ.*, Nov. 6, 1880.—*Rep.*]

3. *Bomford on Aconite in Remittent Fever.*—Dr. Bomford (*Practitioner*, March 1881) records three cases of remittent fever treated with aconite. In its general course and uncertain duration, remittent fever somewhat resembles acute rheumatism, and especially on the West Coast of India is not uncommonly accompanied by slight inflammation of the joints. In the first of Dr. Bomford's cases, the patient, an officer, aged 20, had for four days been treated with large doses of quinine, but without effect, there being a daily exacerbation of fever at 3 p.m. On the fifth day the symptoms had increased in severity; the patient was sleepless, his tongue dry and glazed, skin dry, temperature in the axilla 103 deg., and pulse 88. The quinine was discontinued, and he was given one minim of tincture of aconite at 3 p.m., the dose being repeated every quarter of an hour until 4.30; it was given again at 5, and then every hour until 9. On the following day he was much better; he had slept well, his tongue was moist, the appetite was returning, the temperature was 100.4 deg., and the pulse 82. The tincture of aconite was again given in minim doses at 10.30 and 11 a.m., and then every hour until 7 p.m. At 3 p.m. there was free perspiration, temperature 99.5 deg., pulse 66. At 9 p.m., 97.5 deg., pulse 62. He had no relapse, and a week later returned to duty. The other cases are similar and equally striking. The author considers that the good effects of aconite in this class of fevers may be summed up as follows. 1. It reduces the temperature. 2. It reduces the rapidity of the pulse, and makes it full and strong. 3. It cleans the tongue, and restores the digestive functions. 4. It induces sleep. 5. It increases the quantity of the urine, and seems to have a direct effect in removing the symptomatic congestion of the kidneys. 6. It promotes perspiration. Dr. Bomford has often given aconite, sometimes for days together, to typhoid cases to clean the tongue and induce sleep. If pushed, it will reduce the temperature, but only slightly. The fall of temperature is not always accompanied by profuse sweating, and cannot be explained on the 'heat-loss' theory as being merely the result of evaporation of the sweat. There can be no doubt that aconite acts best when given in frequent small doses. [This is a good little paper, well worth reading. The author is quite right; aconite does act best in small doses, frequently repeated. Many practitioners get no good from aconite, because they do not know how to use it. The dose of the tincture recommended in the *British Pharmacopœia*—from 5 to 15 minims—is absurdly large, and no one with any respect for his patient's safety or his own reputation would ever think of giving it. The best way is to put half a drachm of the tincture in a four-ounce bottle of water, and to tell the patient to take a teaspoonful of this every ten minutes for the first hour, and after this hourly for some hours. Even smaller doses may be given in the case of children. The great indication for the use of aconite is elevation of temperature; the clinical thermometer and aconite bottle should go hand-in-hand. If properly used, aconite is one of the most valuable and indispensable drugs in the *Pharmacopœia.*—*Rep.*] WILLIAM MURRELL, M.D.

4. *Totenhöfer on the Treatment of Cholera Infantum with Resorcin.*—Andeer of Würzburg, having asserted that resorcin ($C_6H_4(OH)_2$) one of the dihydroxyl derivatives of benzine) has a marked antifermentative and antiputrefactive action, this author was induced to try it in an epidemic of cholera infantum during the summer of 1880 (*Breslauer ärztl. Zeitschr.*, 1880, No. 24). Of 91 children treated as out-patients in this way, there died 17. Of these last, three died from complications, viz., pneumonia, croup, and meningitis; that is, deducting these, the mortality was 15.4 per cent., against 34.4 and 30.7 per cent., the two previous years. The writer attributes the following actions to resorcin. 1. The vomiting ceases. 2. Symptoms of collapse are neither caused nor increased. 3. The number of stools is diminished. 4. Resorcin is not so irritant as carbolic acid, but quite as antimycotic. 5. It is readily taken without any corrigent, and is well borne. 6. It brings about rapid absorptive action in the stomach and intestine. Andeer gives adults internally a solution of 15 to 30 grains in 3½ ounces of water; and in accordance with this the drug was administered to children during the first months of life, in a solution of 1½ to 5 grains in 2 ounces of infusion of camomile. Soltmann, in whose clinic the treatment was carried out, gives subcutaneous injections of ether when collapse is present, before commencing the resorcin treatment; in cases of

peritoneal irritation after removal of collapse, resorcin with one to three drops of tincture of opium.

JAMES ANDERSON, M.D.

5. *Petersen on Iodoform and Musk.*—Dr. Petersen (*Petersb. Med. Woch.*, March 28) finds that the odour of iodoform can be completely masked by the addition of tincture of musk, in the proportion of one drop to the ounce of iodoform, whether this be in the solid or in the fluid form.

6. *Oolachan Oil.*—Not long ago, dugong oil was introduced as a rival to cod-liver oil, and now a new claimant has appeared under the name of 'oolachan oil' (*Pharm. Journ.*, April 30, 1881). At ordinary temperatures it appears to have a consistence between that of dugong and cod-liver oils, and a taste that is perhaps slightly more agreeable than either. The oolachan fish is about the size of a herring, and is met with on the coast of British Columbia and Vancouver's Island. It is so full of oil as to be known as the candle-fish, for, when dried, it can be used as a torch.

7. *Dujardin-Beaumetz on the Properties of Waldivin.*—A short time since, M. Tanret separated a crystalline neutral principle from the fruit of *Simaruba Waldivia*, which is frequently confounded with that of *S. Cedron*. Some physiological experiments carried out by M. Dujardin-Beaumetz (*Comptes Rendus*, tome xcii) show that this principle, waldivin, is a powerful poison, but slow in its action, death in the case of dogs not occurring until from five to ten hours after injection, even when the dose is many times that necessary to produce death. In the human subject and in dogs it provokes vomiting when administered by the stomach, but rabbits fall into a profound stupor, which continues until death. In cases of snake-bite and hydrophobia it has failed to prevent a fatal termination, though, when administered to mad dogs in doses of one milligramme daily, it is said to cause an entire suppression of the exacerbations, the animals remaining insensible and dying without convulsions. Waldivin does not appear to exercise any influence in cases of intermittent fever. On the other hand, cedrin, the corresponding principle of *S. Cedron*, is less toxic, but possesses decided febrifuge properties, though the action is slower and less sure than that of quinine. Like waldivin, cedrin exercises no influence in cases of snake-bite; so that, if there be any foundation in the popular reputation in South America of the seeds of *Simaruba Cedron* as a specific against the bites of venomous serpents, it is not due to this principle. Neither substance produces toxic symptoms in frogs, even in large doses.

8. *Oliver on Barium in Medicinal Springs, with Special Reference to the presence of it in some of the Harrogate Waters.*—Dr. G. Oliver (*The Practitioner*, May 1881), calls attention to the fact that some of the wells at Harrogate contain unusually large amounts of barium; the so-called chloride of iron spring nearly three-fourths, the old sulphur more than half, and the Kissingen just over one-fourth of a grain of chloride of barium in the pint. The first of these wells contains about 58 grains; the second about 110; and the third about 113 grains of other salts, mainly chloride of sodium. Dr. Oliver has raised the ingenious question whether at least a portion of the undoubted virtues of these springs is not to be attributed to the presence of these minute quantities of barium. He refers to the employment of barium in medicine since the close of last century, and to the opinion of writers of quite recent date, who speak highly of the effects of small doses of barium, and fortifies himself with the opinion of some of them who incline (perhaps fancifully) to think that such small doses as the one-twelfth and three-fifths of a grain are effective. [At present, although it may be well for Dr. Oliver to continue his investigations, we are not inclined to attach much importance to the presence of small quantities of barium in the Harrogate waters, for several reasons; first, because their action (supposing it were to be considerable) must be greatly interfered with, when burdened with the presence of the large quantity of salts mentioned above—a fact which is apparent to Dr. Oliver. Next, the chloride of barium has been at times very extensively used, and in large doses; for instance, Hufeland used to give 4 to 5 grains of the crystallised chloride three or four times daily; and Lisfranc began with 6 and went on to 12 grains every hour, and at last gave 48 grains in one dose. Similar instances could be quoted, but we have said enough to show that probably the very small doses have not much operation. Further, chloride of barium and chloride of calcium had both fair trials, chiefly in glandular and scrofulous cases, but were both practically given up. Their effects were considered to be very similar, and some in those days thought that the calcium was more powerful than the barium. This, however, seems certainly not to be the case. Dr. Wimmer has called attention to the share which chloride of calcium may have in the operation of the Kreuznach and some other waters. We would venture to suggest that, as that salt is present in the Harrogate waters in at least fifteen times the quantity of barium, it would be well worth Dr. Oliver's while to take up the consideration of the operation of a substance which occurs in so very tangible a quantity that its action must in all probability be stronger than that of the barium.—*Rep.*] R. NEALE, M.D.

9. *Klein on Atropin in Vaseline.*—Dr. Klein of Vienna recommends, in place of the ordinary solutions of atropin, to use an ointment prepared as follows. Sulphate of atropin, ¾ gr.; vaseline, 160 gr. If the atropin salt be thoroughly triturated with the vaseline it is unnecessary to use any solvent. The application of this ointment is much easier than the instillation of the solution. It is best applied by means of a camel's-hair brush to the inner surface of the lower eye-lid pulled down.

10. *Parodi on Xanthoxylum Naranjillo.*—A rutaceous plant, growing wild in the Argentine Republic, where it is called 'naranjillo', and which has recently been described as a new species by Griesbach, under the name of Xanthoxylum Naranjillo, has been examined by D. Parodi (*Revista Farmaceutica*, vol. xviii, and *Pharm. Jour.*) His attention was directed to it through its resemblance to pilocarpus jaborandi in its therapeutic properties, which are those of a sialagogue, sudorific, diuretic, and stimulant. He reports that he has separated a substance forming salts with acids, having a decided alkaline reaction, and giving all the reactions characteristic of an alkaloid, which he has named 'xanthoxylina'. The plant also yielded a hydrocarbon, 'xanthoxylene' ($C_{10}H_{16}$), analogous to pilocarpin, a crystalline stearoptene, xanthoxylin, and finally an aromatic essential oil, having an odour between balm and lemon. From the great similarity of this plant to jaborandi, it appears worthy of further experiment in a therapeutic direction.

11. *Artificial Carlsbad Salt.*—The formula proposed by the German Apothecaries' Society is as follows. Chloride of sodium, pure, powdered, 115

parts; sulphate of potassium, powdered, 125 parts; sulphate of sodium, dried, 200 parts; bicarbonate of sodium, powdered, 205 parts. This forms a white dry powder. A solution of 93 grains of the above mixture in a litre of distilled water yields a solution corresponding to the natural Carlsbad water.

12. *Blackwell on Compound Liquorice Powder.*—Dr. E. F. Blackwell remarks (*Med. Times*) certain faults in the pulvis glycyrrhizæ compositus of the German Pharmacopœia, and offers a substitute. The original formula is as follows. In each teaspoonful, weighing 36 grains, there are of pulverised liquorice and of pulverised senna, each 6 grains; of washed sulphur and of pulverised fennel each 3 grains; of white sugar, 18 grains; that is, a proportion of laxative to excipient of 1 to 3. He proposes as a substitute the following, under the name of pulvis sennæ compositus: pulverised senna, washed sulphur, and white sugar, of each 8 grains; pulverised fennel, and pulverised liquorice (āā ʒij), of each 4 grains; in all 32 grains, or an equal proportion of laxative and excipient. On this, the editor of *New Remedies* says: Dr. Blackwell thinks the amount of sugar in the first formula objectionable, on account of its liability to cause fermentation in sour stomachs, which, considering that the actual amount of one dose is not very great, appears to us to be rather hypercritical. Moreover, people with such decidedly sour stomachs require a different sort of purgative from the one provided in either of these formulas. We have used the old formula for a number of years with excellent results, and have but once or twice found patients with whom it disagreed; which, after all, is worth something more than a theoretical objection.

13. *Dumas on the Action of Aconitine in Neuralgia.*—M. Dumas of Cette has been studying the action of aconitine in facial neuralgia, and comes to the following conclusions (*Journ. de Thérap.*) Crystallised aconitine is a powerful medicine, very efficacious, especially in congestive facial neuralgia, and in some other forms of neuralgia *à frigore*. It is useful in the majority of catarrhal affections, in which it may replace the various preparations of aconitine. It deserves to be preserved over the other kinds of aconitine, which are ill defined and unequal in their action. It is but slightly efficacious in tic-douloureux of the face, in which it only produces temporary sedative effects. As with the other alkaloids, it is tolerated when it is methodically administered. It may be long continued, without fear of the effects of an accumulation in the organism. It should be commenced in small doses and progressively increased. Unless in cases of tic-douloureux, the average dose should be restricted to two milligrammes daily. Carefully prepared granules containing a quarter of a milligramme (.0038 grain) of the alkaloid, or half a milligramme (.0077 grain) of the nitrate, deserve preference.

14. *Rochester on Grindelia Robusta in Asthma.*—There have recently appeared some very strong endorsements of this drug as a most valuable agent in asthma. In a paper read before the King's County Medical Society, Dr. T. M. Rochester (*New York Med. Rec.*, May 1881) said that he had used the drug in over sixty cases of asthma. In all of these it produced relief. Sometimes this was permanent; very often it lasted for a long time. It always did some good. It seemed to act equally well in inflammatory and simple spasmodic asthma. Even in cardiac asthma, combined with other drugs, the best results were obtained. It is useful both in the attack and during the interval, to ward off future attacks, but especially for the latter purpose. For the attacks, half drachm doses of the fluid extract are to be given every fifteen minutes until relief is obtained. In the interval it may be given in fifteen to twenty drop doses every four or six hours. This should be continued for from a week to ten days, when, except in very obstinate cases, the patient will experience relief for a period of six or eight months, or longer. In addition to this testimony, we find in the *Therap. Gaz.* a report on the use of the drug at the United States Marine Hospital at Portland, Me. Dr. Berry, acting assistant surgeon, says that the remedy was found very efficient in relieving attacks of asthma.

15. *Hollman on Pepsine as a Solvent in Albuminous Obstruction of the Bladder.*—Dr. Hollmann (*Nederl. Weekbl.*, 18, p. 272) reports the case of an old man, aged 80, suffering from retention of urine, in whom the introduction of a catheter failed to procure the desired result. It was found that the bladder contained coagulated albuminoid masses, mixed with blood. A few hours after the injection of about sixteen grains of pepsine dissolved in water, a large amount of a dark, viscid, fœtid fluid readily escaped by the catheter.

16. *Playfair on Artificial Human Milk.*—Dr. W. S. Playfair, in the *Brit. Med. Jour.*, May 21, says: I should like to direct the attention of practitioners to the artificial human milk now prepared by the Aylesbury Dairy Company, at a cost little over that of the best nursery milk. This valuable method of treating cow's milk was first brought under my notice some years ago by Dr. Frankland, the eminent chemist, who devised it for one of his own children who was ill; and I have since used it extensively in my practice. Its composition is absolutely identical with that of human milk; and under its use the risks and disadvantages of the bottle-feeding of infants are reduced to a minimum. I have been in the habit of instructing nurses how to prepare it at home from Dr. Frankland's recipe, but the trouble and difficulty of making it stood seriously in the way of its general adoption; and, unless the nurse happened to be exceptionally intelligent, failure very frequently followed. For this reason, I suggested its manufacture to the Aylesbury Dairy Company, and the specimens with which they have since supplied me have been perfectly satisfactory and require no further treatment than heating to the proper temperature. I look upon it as immeasurably superior to asses' milk, than which it is much cheaper; and if this valuable preparation were more generally known and used, much illness, in the case of children who cannot be brought up at the breast, would be avoided.

17. *Fairthorne on Ammonium Bitartrate.*—R. Fairthorne, in *Amer. Jour. of Pharm.*, says, it is well known, that when a strong solution of tartaric acid is added either to the stronger solution of ammonia, or to a saturated solution of ammonium carbonate, so that there will be an excess of acid, a white crystalline precipitate is produced corresponding in appearance and taste to cream of tartar. This salt, which may also be prepared by mixing concentrated solutions of one part of ammonium chloride, and three parts of tartaric acid, may possibly find a place either commercially or medicinally amongst the useful articles of trade or medicine.

18. *Zander on Hydrochloric Acid for Chlorosis.*—Dr. Zander of Eschweiler (Virchow's *Archiv*, Band lxxxiv, Heft 1) propounds a new theory of chlorosis.

The importance of iron in the treatment of this condition is well known, hence the Salernian aphorism: 'Qui nescit martem, nescit artem.' The red blood-corpuscles, diminished in number, increase under the use of iron. Yet, it is often observed that this improvement is maintained only so long as the administration of iron is kept up, relapse following its abandonment; often, too, iron causes impairment of digestion. But the normal quantity of iron in the blood is very small, only .46 in 100 parts of dried hæmoglobin, less than is found in cow's or human milk. In nursing children, iron is found in the fæces and urine, so that the quantity used in the body must be very small. All food and water contain iron sufficient for physiological requirements. The fæces and urine of chlorotic patients contain distinct traces of iron. These facts point to the conclusion that the absorption of iron is only deficient, owing probably to the want of hydrochloric acid in the gastric juice, by means of which iron is dissolved, and made capable of being absorbed. Manassëin has shown that in fevers and anæmia the hydrochloric acid of the gastric juice is deficient. He, therefore, suggests that the rational treatment of chlorosis should be by administering hydrochloric acid after food, and states that he has treated many cases on this plan with the best results. ROBERT SAUNDBY, M.D.

MEDICINE.

RECENT PAPERS.

1. STRÜBING, P.—On a Case of Catalepsy. (*Deut. Archiv. für Klin. Med.*, Band xxvii, s. 111.)

2. OEBEKE.—On the Clinical Symptomatology and Diagnosis of Localised Diseases of the Brain. (*Berl. Klin. Woch.*, 1880, Nos. 41 and 42.)

3. BOURNEVILLE and REGNARD.—On a Method of Determining Hypnotism. (*Le Prog. Méd.*, Nos. 14 and 15.)

4. TENNESSON.—Sudden Death after Thoracentesis.

5. RENAUT.—On Epileptiform Convulsions after Enteric Fever. (*Arch. de Physiol.*, 1881, No. 1; and *Gaz. Hebdom.*, p. 557.)

6. BUERMANN and BRISSAUD.—Massive Pneumonia. (*Archives Générales de Méd.*, Feb. 1181.)

7. POWELL, DOUGLAS.—On Two Cases of Apex-Pneumonia. (*Brit. Med. Jour.*, May 1881, p. 715.)

8. COUPLAND.—On Anæmia. (*Brit. Med. Jour.*, April 1881, p. 634.)

9. LEE, ROBERT.—On the Diagnosis and Treatment of Whooping-Cough. (*Lancet*, April 1881, pp. 694, 730.)

10. MOXON.—On Angina Pectoris. (*Brit. Med. Jour.*, April 1881, p. 672.)

11. GAYTON.—On Recovery from Hæmorrhagic Small-Pox. (*Brit. Med. Jour.*, April 1881, p. 561.)

1. *Strübing on a Case of Catalepsy.*—The patient, a girl, aged 18, with unequivocal signs of hysteria, in addition, at each of her menstrual periods (which were regular), had a cataleptic seizure usually lasting some hours (*Deutsch. Arch. für Klin. Med.*, Band xxvii, s. 111). The advent of these attacks announced itself before loss of consciousness by a feeling of lassitude and 'flexibilitas cerea'. Their occurrence could be hastened by employing the manipulations used to produce the hypnotic state. The cataleptic condition could also be induced during the intervals by passing the constant current transversely through the head, and the attack could be broken short by compression of the left ovary. During the cataleptic seizures, a marked diminution in the amount of actual nitrogen and phosphoric acid excreted occurred; and the more severe the attack, the better marked was this result.

2. *Oebeke on the Clinical Symptomatology and Diagnosis of Localised Diseases of the Brain.*—Dr. Oebeke relates the following cases (*Berl. Klin. Woch.*, 1880, No. 41 and 42). The first case was that of a man, aged 25, with a hereditary taint, who had, at the age of 17, a sudden apoplectiform attack, accompanied by right hemiplegia and aphasia (the right side of the face remaining unaffected). The paralysis got better, but its place was taken by convulsive spasms, commencing in the right arm, spreading to the right leg and side of the face, and at last extending to the left side of the body. The patient then lost consciousness, and a peculiar derangement continued for some days. At other times the affection remained confined to one side, or a clouding of the intellect lasted for some hours. A transitory attack of aphasia usually followed these attacks. After a severe fit of convulsions, death occurred. (Special senses, cranial nerves, and sensation, however, remained unaffected.) At the *post mortem* examination, a brown patch was discovered at the root of the left posterior central convolution, dividing the superior parietal convolution. This patch, about the size of a shilling, was a few lines in thickness, and beneath it was a hollow space communicating with the anterior portion of the posterior course of the left lateral ventricle, by an opening of the size of a threepenny-piece in its roof. The second case was that of a man, aged 50, from his youth weak-minded and an epileptic. The patient had an apoplectic attack which left him with left hemiplegia, anæsthesia of the paralysed parts, deficiency of muscular sense, and vaso-motor and trophic derangement. At the *post mortem* examination, the membranes of the brain were found opaque, thickened, adherent to one another, and to the surface of the brain. In the right lateral ventricle, the corpus striatum appeared transformed into a yellowish pap-like mass, and the optic thalamus contained a small cavity filled with a dark bloody mass. The ependyma of the entire right ventricle was yellow and softened. G. H. MAKINS.

3. *Bourneville and Regnard on a Method of Determining Hypnotism.*—MM. Bourneville and Regnard have reprinted (in *Le Prog. Méd.*, Nos. 14 and 15) the chapters from their *Iconographie Photographique de la Salpêtrière* on the procedures employed for determining hypnotism or the mesmeric sleep. They recommend that the subject should be, if possible, a young woman of sentimental character. This choice being made, the operator seats his patient before him, and looks steadily at her eyes, while he holds her thumbs firmly between his fingers. The passes are absolutely useless, and only cause delay. After two or three minutes of this motionless state, her eyes are seen to redden, and tears bathe the eyelids and run over the cheeks. The fixed look must be maintained; often the subject shuts her eyes herself, and falls backwards. If this do not occur spontaneously, the operator lets go the hands of his subject, and applies his thumbs over the eyes, so as to shut the upper eyelids. Sleep is then immediate; the subject falls back, heaving a series of sighs; a little froth sometimes appears on the lips. The simple application of the thumbs on the eyeballs may sometimes provoke hypnotism without previous preparation. In order to produce catalepsy, it is merely necessary to lift the eyelids.
R. SAUNDBY, M.D.

4. *Tennesson on Sudden Death after Thoracent-*

esis.—M. Tennesson received into his wards a man, aged 53, with emphysema and pleuritic effusion. Twenty-five days after the patient entered the hospital, the effusion not having diminished, thoracentesis was performed, and gave issue to about two pints of transparent liquid. Improvement set in at first, but, nine hours afterwards, the patient died. The necropsy revealed the presence of false membranes in the pleura, atelectatic caverns in the right lung, and lesions of interstitial pneumonia in the left lung; there was no hypertrophy of the heart nor any valvular lesion. M. Tennesson attributes death to syncope, and is inclined to doubt whether he did not withdraw too much fluid in the operation.

5. *Renaut on Epileptiform Fits after Enteric Fever.*—M. Renaut relates, in the *Archives de Physiologie*, No. 1, 1881, a case, of which the subject was a man, aged 23, very robust, and who, during convalescence after an attack of enteric fever, had epileptiform fits, and died in the course of one of these attacks.

6. *Beurmann and Brissaud on Massive Pneumonia.*—Grancher was the first to point out the existence of a variety of pneumonia which showed most of the clinical symptoms of pleuritic effusion, and which deserved the special epithet of massive. Recently, two cases of this kind were observed at Professor Lasègue's clinic (*Archives Générales de Méd.*, Feb. 1881). The first was that of a labourer, aged 50, who developed an acute pneumonia. Examination revealed absolute dulness in front and behind on the right side. At the base and in the axillary region, resonance was still found; in the supraspinous and infraclavicular regions, absence of respiratory *bruit;* in the infraspinous region fine moist râles, but neither crepitant nor subcrepitant. Bronchial breathing was very marked at the inferior border of the scapula, extending from the axillary line to the vertebral column. Below this point there was a faint vesicular murmur, distant in sound and largely masked by sonorous *râles.* In front, similar conditions existed, but there was no respiratory murmur. On the left side there were apparently only the signs of bronchitis. There was little cough, and the expectorated matter was not characteristic of any special lesion. The febrile movement was not severe. The patient died soon after admission to the hospital. At the necropsy, the upper lobe of the right lung was found completely hepatised, having assumed a dirty yellowish colour. The other lobes and the left lung were not greatly altered; but the pathological condition which led to the clinical diagnosis of massive pneumonia was found to reside in the bronchial tubes distributed to the upper lobe. They were completely filled to their finest ramifications with a white, elastic, apparently fibrinous substance, which was not found elsewhere. Other cases are cited, and the writers, MM. Beurmann and Brissaud, finally conclude that, although massive pneumonia may at some time during its course closely resemble in its clinical aspects pleurisy with effusion, yet in certain cases bronchial breathing coexists with the dulness on percussion. This respiratory sound will be likely to exist at the beginning of the malady, when the fibrinous exudation has not yet advanced to the root of the lungs. In doubtful cases, an exploratory puncture would appear to be justified.

7. *Powell on Two Cases of Apex-Pneumonia.*—Dr. Douglas Powell, in the *Brit. Med. Journ.*, May 1881, p. 715, gives the history of two cases of apex-pneumonia. In both cases there was a history of intemperance, a frequent precursor of apex-pneumonia. CASE 1.—An ex-soldier, of very intemperate habits, aged 35, was admitted into hospital five days after being attacked by rigors, followed by severe cough. No definite physical signs could be discovered. The temperature was 101.2, and pulse 120. Towards the latter part of the day, the former rose to 105.2. Auscultatory signs were not found before the eighth day after the rigors. It took two to three days more for the phenomena of consolidation in the upper third of the right lung to become fully developed; and meanwhile, the severity of the pyrexia had passed, and resolution had already commenced at the part first affected. 'This,' remarks Dr. Powell, 'is only an exaggerated degree of what is typical of the pyrexia of pneumonia. The fever precedes the local signs, lasts through the stage of active hyperæmia, and terminates with that of exudation. With the complete consolidation of the affected lung, the disease—pneumonia—is at an end; but the patient has yet to get rid of the products of that disease—exuded lymph and corpuscles—occupying the recesses of his lung. This is accomplished mainly by a process of rapid fatty degeneration and emulsification of the exudation, which is subsequently in part expectorated as 'purulent' sputa, but in a greater part absorbed by the lymphatics of the alveoli'. In some cases, during this process, secondary febrile symptoms set in, to the alarm of the inexperienced, due to the absorption of inflammatory products. The case was complicated by delirium tremens. Dr. Anstie has pointed out that delirium tremens is frequently complicated by pneumonia of a most insidious and fatal kind. Apex-pneumonia occurring, as it commonly does, in drunkards, is a very fatal disease; in this case, a good heart carried the man safely through. In CASE 2, the patient was admitted moribund. The *post mortem* examination showed characteristic grey hepatisation, limited to the upper half of the right lung, with general hyperæmia and œdema of both lungs. The kidneys were not sound. The man had been a free drinker.

8. *Coupland on Anæmia.*—Dr. Sidney Coupland, at the conclusion of his Gulstonian lectures on anæmia, gives a general review of the treatment (*Brit. Med. Journ.*, April 1881, p. 634). The necessity of proper diet and general hygienic measures are self-evident. Of all medicinal agents, iron maintains the pre-eminence. How it acts there is no satisfactory evidence to show; but, as Trousseau remarked, iron in chlorosis is, in heroic doses, as much a specific as mercury in syphilis; and our recent methods of calculating the red corpuscles enable us to accurately estimate the rapid action of iron upon the constituents of the blood. The sulphate, in large doses, is well borne in almost every case of pure chlorotic anæmia. Next to iron, and in some cases preferable, stands arsenic. Phosphorus is useful in some cases. Manganese has disappointed many. The subject of transfusion of blood is one that demands the most thorough examination: of its value in cases of anæmia due to sudden loss of blood, there is no question; but in cases of pernicious anæmia, its value is not yet decided. In twenty such cases in which it has been carried out, six recovered, one not permanently; and all the successful cases occurred in Dr. Quincke's practice.

9. *Lee on the Diagnosis and Treatment of Whooping-Cough.*—Dr. Robert Lee, in the *Lancet*, April 1881, pp. 694, 730, gives his experience upon various points connected with whooping-cough, derived from the opportunities afforded by the Children's Hos-

pital, in Great Ormond Street. Dr. Lee is certain of the fact that the disease is much more frequent in infants than usually believed. The period of incubation—and it is very infectious—is from twenty-one to thirty-two days. A second attack, in those closely attending children suffering from whooping-cough, is not uncommon. Infants whoop but rarely, and therefore the cough is often mistaken for some other disorder. A whoop in a young infant ought to excite surprise rather than be expected. Cullen thus writes: 'I have had instances of a disease which, though evidently arising from a chin-cough contagion, never put on any other form than that of a common catarrh'. This is the form of the disease which proves so dangerous to early life. Active diarrhœa is a symptom of serious import in early infancy. Should, however, the infant not succumb, the disease appears to exhaust itself. Sir H. Holland expresses an opinion that infantile remittent fever and whooping-cough depend upon the same active cause. Occasionally, all the symptoms of whooping-cough suddenly cease, and, after an interval of several months, as suddenly reappear, without any definite reason. The specifics for whooping-cough are numerous. [*Vide Medical Digest*, section 714. During the last five years the number of remedies has nearly doubled. —*Rep.*] Cod-liver oil and steel, and active purging, are mentioned by Dr. Lee among the less known valuable therapeutic agents; reliance being placed upon no specific, but each case being treated on its own merits.

10. *Moxon on Angina Pectoris.*—The history and origin of angina pectoris formed one of the subjects touched upon by Dr. Moxon in his Croonian lectures (*Brit. Med. Journ.*, April 1881, p. 672). It is well known that in some cases of this painful malady, nitrite of amyl affords instant relief, while, in other instances, nothing but morphia, injected hypodermically, will assuage the sufferings of the patient. Dr. Moxon points out that it is in cases where there is high tension that the nitrite of amyl succeeds, by relaxing the small arteries. Sphygmographic tracings showed that, when the paroxysm was at its height, the heart was labouring under high pressure; directly the nitrite of amyl was given, the signs of 'high tension' began rapidly to pass off. The drug first relaxed the arteries and reduced tension, and then a little later stimulated the heart to act more sharply. 'From this observation it would appear that the pain in angina pectoris occurs in persons whose arterial tension is high; but that the attack of angina does not coincide with an increase of tension; rather, indeed, with a decrease of it. The pain comes on through a temporary, and, in fatal cases, a permanent failure of the power of the heart to cope with the high tension of the arteries; and the relief of the pain comes, partly through the amyl relaxing tension, and partly through its stimulating the heart. In short, angina pectoris arises in such cases whilst the heart is labouring in vain against an ordinary high tension; that is, through relative failure of the heart against high tension; and as pain occurs with a lower than normal tension, the painful parts must at the time have increased sensibility to such tension. In other words, we must recognise state of nerve as well as strain of vessel among the causes of the pain.' In the case where the nitrite of amyl was powerless in relieving the pain, the sphygmographic tracings showed that the ordinary pulse had characters of high tension very slightly greater than normal; and, when amyl was inhaled, hardly any effect at all was produced upon the pulse. A *post mortem* examination revealed the fact that the heart was of normal size. Fully one-third of the left ventricular wall was converted into a yellow fat-like substance, two inches square, with a smaller degree of fibrous degeneration extending around. Dr. Moxon inclines to the belief that nitrite of amyl is of chief value in those cases of angina pectoris which are due to aortic disease. Two cases of heartache are recorded by Dr. Moxon, in which the cardiac nerves were found involved in disease; and in these cases the amyl also failed to produce any effect, but morphia, hypodermically, gave instant relief.

11. *Gayton on Recovery from Hæmorrhagic Small-Pox.*—Dr. Gayton records, in the *Brit. Med. Journ.*, April 1881, p. 561, an unusual case of recovery from hæmorrhagic small-pox, in a girl, aged 11, which, from its continuity, was originally hopeless; observations in eight thousand cases, not having included a similar instance. Details of treatment are not given. [In the *Practitioner*, 1879, p. 329, Mr. J. R. Gasquet recommends the use of belladonna in those rapidly fatal cases of variola and other infectious diseases where the heart's action is suddenly arrested by the virulence of the poison.—*Rep.*]

RICHARD NEALE, M.D.

SURGERY.

RECENT PAPERS.

1. OSBORN, SAMUEL.—On Phimosis as a Cause of Infantile Hernia. (*Brit. Med. Jour.*, March 1881, p. 427.)

2. PRATT.—On the Persistent Lengthening of the Limb after Reduction of Dislocation of the Hip. (*Lancet*, March 1881, p. 500.)

3. BERRY, WILLIAM.—On Spina Bifida Treated by Injection of Morton's Iodo-Glycerine Solution. (*Lancet*, Nov. 1876, p. 776.)

4. THORNTON, PUGIN.—On Sudden Obstruction of the Œsophagus. (*Lancet*, April 1881.)

5. MEERES, E. E.—On Abscess of the Parotid Gland from Hay entering Stenson's Duct. (*Brit. Med. Jour.*, April 1881, p. 586.)

6. BENNETT. — On Fracture of the Neck of the Humerus complicated with Dislocation of the Shoulder. (*Brit. Med. Jour.*, April 1881, p. 637.)

7. BLAKER. — On Rectal Stricture. (*Lancet*, April 1881, p. 659.)

8. DOWNES.—On Neuromata. (*Lancet*, April 1881, p. 684.)

9. GOTTSTEIN.—On Rhinitis and Plugging of the Nose. (*Berl. Klin. Woch.*, 1881, No. 4.)

10. REDARD.—Surface-Temperature of the Joints in Health and Disease. (*Jour. de Méd. de Bordeaux*, Feb. 13, 1881.)

11. FÜLLER.—Thymol in Burns. (*Therap. Gaz.*)

12. SAYRE.—Spina Bifida treated with Plaster-of-Paris. (*Chicago Med. Jour. and Exam.*)

13. NIEDER.—On Electrolysis in the Treatment of Vascular Tumours. (Knapp's *Archives*, March 1881.)

14. PARKER, R.—On a Case of Arterial Hæmatoma of the Fore-arm. (*Brit. Med. Jour.*, April 23.)

15. MORGAN, J. H.—Case of Progressive Painful Inflammation of Arteries. (*Ibid.*)

1. *Osborn on Phimosis as a Cause of Infantile Hernia.*—In the *Brit. Med. Jour.*, March 1881, p. 427, Mr. Samuel Osborn confirms the statements of previous observers of the frequency of hernia in cases of phimosis, ten cases having fallen under his notice within the last month. In all these cases,

phimosis was the undoubted cause of the rupture. Circumcision is the best plan to adopt in all cases of elongated and contracted prepuce. Frequently a single truss is followed by a rupture on the opposite side, if circumcision be not performed. [In the LONDON MEDICAL RECORD, 1878, p. 441, is a notice of thirty-one cases, under the care of Mr. J. A. Kempe, in which hernia and phimosis were associated. Mr. Owen, in the *Brit. Med. Jour.*, Feb. 1880, p. 313, writes: 'Perhaps the commonest cause of hernia in childhood is a small preputial or urethral orifice, and next to that I would put the smegma-hiding or adherent prepuce. All such conditions give rise to frequent and forcible expulsive efforts.'—*Rep.*]

2. *Pratt on Persistent Lengthening of the Limb after Reduction of Dislocation of the Hip.*—Dr. Pratt reports a case in the *Lancet*, March 1881, p. 500, which caused him considerable uneasiness, until he remembered the possibility that the condition of the limb might be congenital. A man, aged 35, dislocated his right hip. When reduction was effected, the limb still remained half-an-inch longer than its fellow. After the man was up and about, he stated he walked as usual, thus showing that the condition was, to him, normal.

3. *Berry on Spina Bifida Treated by Injection of Morton's Iodo-Glycerine Solution.*—Mr. William Berry brings forward three cases treated after Dr. Morton's plan (*Brit. Med. Jour.*, March 1881, p. 468). Failure occurred in one case from not carrying out Dr. Morton's express advice, viz., to avoid any loss of the spinal fluid. The less fluid allowed to escape the better; and the surgeon should not leave the case before he has effectually sealed up the opening made by the trocar and cannula, otherwise failure will follow. [Dr. Morton's original paper may be consulted in the *Lancet*, Nov. 1876, p. 776.]

4. *Thornton on Sudden Obstruction of the Œsophagus.*—Mr. Pugin Thornton relates, in the *Lancet*, April 1881, p. 617, two interesting cases in which dysphagia suddenly arose. In Case 1, a lady, over sixty years of age, the difficulty to swallow food came on suddenly during dinner. With difficulty bougies were passed, and she made a perfect recovery. In the second case, a major, aged 62, complained that dysphagia came on suddenly while eating, three weeks before consulting Mr. Thornton. The patient was well nourished, and there were no indications of a cancerous cachexia. The smallest sized bougie could not be passed. Death occurred in a few weeks, and, on examination, an annular cancerous stricture was found, about an inch and a-half above the cardiac orifice. Mr. Henry T. Butlin, at page 677, refers to two somewhat similar cases, that occurred in the practice of Dr. Baly and Dr. Traube.

5. *Meeres on Abscess of the Parotid Gland from Hay entering Stenson's Duct.*—In the *Brit. Med. Journ.*, April 1881, p. 586, Dr. Edward E. Meeres relates a case in which a fragment of hay had worked its way into the parotid duct, and caused deep-seated inflammation, terminating, after several months' suffering, in a large abscess. A piece of hay, one-third of an inch long, was found in the discharge. The patient remembered having chewed some hay five months previously, and that a piece lodged between the gum and cheek, which caused him discomfort, but which, after a time, he thought he had dislodged.

6. *Bennett on Fracture of the Neck of the Humerus, complicated with Dislocation of the Shoulder.*—Dr. E. H. Bennett's paper, in the *Brit. Med. Journ.*, April 1881, p. 637, is based upon five cases in the Dublin Museum, and another case by Mr. Eve. The point that Dr. Bennett discusses is the sequence of events; whether the fracture occurs previous to the dislocation or *vice versâ*. Sir Astley Cooper writes: 'This accident generally occurs in the following way. A person falls, and pitches with violence upon his shoulder, or a heavily laden carriage passes over it. By the first impression of the accident, the os humeri is dislocated; and, by a second, the neck of the bone is broken, and the head detached and lodged in the axilla'. Delpech, who was the first to accurately record a case of this kind, expresses an opinion that the fracture is the first step, the dislocation the second. In a case read by Mr. Eve, before the Royal Medical and Chirurgical Society, an opinion was formed in favour of Delpech's views. Dr. Bennett believes Sir Astley Cooper's opinion to be, generally, nearer the truth. [In the *Medical Times and Gazette*, March 1866, p. 247; January 1875, p. 115, Mr. Hutchinson, in clinical lectures, enters very fully upon this subject; and, while admitting the possibility of simultaneous fracture and dislocation, admits that he has never seen a specimen of such. He strongly suspects 'that most of the cases in which we hear of dislocation and fracture together, are really instances of fractures unusually high up, and in which the appearances of dislocation are subsequently simulated'. Later, in a paper published in the *Lancet*, March 1876, p. 341, whilst commenting upon a case recorded by Dr. Sheen in a previous number, Mr. Hutchinson proves that one case, diagnosed as combined fracture and dislocation, was found, on dissection, to be merely one of fracture through the tuberosities, with no attendant dislocation further than that caused by muscular action on that portion of the head of the humerus left in the glenoid cavity, while the administration of chloroform proved that dislocation was absent in another case. Mr. Hutchinson writes: 'I have repeatedly endeavoured to claim the increased attention of surgeons to the fact that fractures of the head of the humerus, when united, often so closely resemble dislocations as to deceive even the very experienced. The fact is of such importance, both in practical surgery and in its medico-legal aspects, that I shall perhaps be excused for again adverting to it. I have little doubt that not a few of the cases in which actions are brought against surgeons for overlooking dislocations into the axilla, are cases in which the original opinion was the correct one.....Many a surgeon has, I have no doubt, had his reputation most undeservedly damaged by cases of the kind referred to; and I feel sure that it is very important that the possibility of this kind of simulation should be more widely recognised.' In the *Medical Times and Gazette*, November 1869, p. 541, Mr. Haynes Walton records a genuine case of combined fracture and dislocation, where, ten weeks after the accident, the bone, having firmly united, the dislocation was most ingeniously reduced. A good paper, by M. Richet, may be consulted in the *British and Foreign Med.-Chir. Rev.*, January 1857, p. 146.—*Rep.*]

7. *Blaker on Rectal Stricture in a Lad.*—In the *Lancet*, April 1881, p. 659, Mr. N. P. Blaker reports the case of a lad, aged 16, in whom was found an annular stricture, about an inch and a-half above the anus, barely admitting the tip of the forefinger. The surrounding tissues were very hard and nodulated, but there was no ulceration. Left colotomy was performed, and two months subsequently, the general health was good, the patient looking fat and

well, but the stricture was as tight as ever. The nature of the disease was doubtful; that it was malignant was improbable, the good health and absence of any signs of breaking down being opposed to that theory; that it was syphilitic was more probable, although specific treatment failed to make any impression, and there was no other evidence in favour of such a diagnosis. The case is apparently unique.

8. *Downes on Neuromata.*—Mr. E. Downes, in the *Lancet*, April 1881, p. 684, suggests that, in many cases of nerve-tumour, the morbid mass may be shelled out by a longitudinal incision, instead of excising the growth with a portion of the nerve itself, or amputating the limb, as in some cases has been done. Three cases are related in which this mode of treatment was successful, the nerve-fibres completely surrounding the tumours, which lay in the centre almost entirely unconnected with the nerve itself. In one case, in which a neuroma of the median nerve was treated by excising the mass with the included portion of the nerve, a large number of smaller neuromata spontaneously disappeared after the larger one was thus removed. [Prof. Kosinski narrated a somewhat similar case (*Medical Times and Gazette*, November 1874, p. 558); here, after a neuroma of the small sciatic had been excised, a large number of similar tumours spontaneously disappeared.—*Rep.*] R. NEALE, M.D.

9. *Gottstein on Rhinitis and Plugging of the Nose.*—This author defends (*Berl. Klin. Woch.*, 1881, No. 4) his treatment of ozæna by means of a cotton-wool plug against the adverse criticisms of different writers. He holds to the following opinions. 1. Plugging is the best known means of preventing the formation of crusts in rhinitis having a tendency thereto. 2. Fœtor arising from the so-called atrophic rhinitis is immediately removed by plugging, not so that arising from necrosis. 3. Plugging is effectual in atrophic rhinitis, only when the plug or tampon is in actual contact with the diseased mucous membrane. The tampon ought to be 1½ to 2 inches long, and at the utmost a fifth of an inch thick, so that it may reach almost to the posterior nares. Both nasal cavities should never be plugged at the same time. The plug should remain, as a rule, two to three hours *in situ;* but sometimes it may remain as much as twelve hours, and some patients wear it during the night. Medical treatment is, he says, useless, but a vigorous nasal douche in the intervals is beneficial. In the hypertrophic form, the plug readily causes bleeding and pain. In defect of the septum with formation of crusts, plugging gives most excellent results. JAMES ANDERSON, M.D.

10. *Redard on Surface-Temperature of the Joints in Health and Disease.*—According to Redard (*Jour. de Méd. de Bordeaux*, Feb. 13), in health, the temperature of the joints decreases with their distance from the trunk. He finds the average temperature of the knee, anteriorly, 91.4 deg. Fahr. (33.0 deg. Cent.); posteriorly, 95 deg. Fahr. (35 deg. Cent.); of the ankle, anteriorly, 93.2 deg. Fahr. (34.0 deg. Cent.); posteriorly and laterally, 92.3 deg. Fahr. (35.5 deg. Cent.); of the elbow, anteriorly, 93.2 deg. Fahr. (34 deg. Cent.); posteriorly, 91.4 deg. Fahr. (33 deg. Cent.); posteriorly, 86.9 deg. Fahr. (30.5 deg. Cent.) The temperature is higher in the flexures and in proximity to the large blood-vessels. Repeated movements of the joint raise its temperature from 0.5 deg. to 1 deg. Fahr. In disease, the thermometer can be of value only in the superficial joints. In sprains, the temperature rises in a few hours after the injury; it reaches its maximum on the fourth day, when it begins to decline. If the elevated temperature continue, it is due to a complicating arthritis. In arthritis, the temperature rises from 2 to 3 deg., and tends to approach the general temperature. Hydrarthrosis is always accompanied with an elevation of temperature varying from 0.5 deg. to 1 deg. Fahr. In cases of effusion following fracture, a foreign body in the joint, or an old ankylosis, elevation of the temperature is always present, and it corresponds to the severity of the arthritis. The temperature in white swelling is also proportionate to the acuteness of the morbid process.

11. *Füller on the Use of Thymol in Burns.*—Dr. Füller, of Neukirchen, a mining district in which burns caused by explosions of fire-damp or powder are frequent, has adopted a mode of treatment of burns by thymol, which he has found attended by most favourable results (*Hom. Rundschau* and *Therapeutic Gazette*). Each patient, as soon as admitted to the hospital, receives a warm bath. The burnt surface and its surroundings are then washed with an aqueous solution of thymol (1 to 1,000), followed by the application of thymol spray for several minutes. The blisters are not disturbed, but are handled with extreme care. The raw surface is then painted with a one per cent. thymolised linseed oil. The patient is then laid on a waterproof mattress, the temperature of the room being kept comfortably warm. Particles of coal or other foreign matter, if not too minute, are, as a matter of course, at once removed. It is often very difficult to so lay the patient that the burned places are relieved of pressure, and it is frequently necessary to allow him to remain in a sitting posture, sometimes for several days, with support for the chin, or even *à la vache*, by suspending him by means of wide strips of muslin, passing under the chest or abdomen—the strips being fastened above. The application of thymol should at first be repeated every ten minutes; and, as it relieves pain very remarkably, the patients themselves call for it. For this purpose large soft-haired paint-brushes are used. At first the oil is absorbed somewhat rapidly, and as soon as this has occurred a sensation of intense burning follows. The applications are gradually made less frequently; as an indication of their necessity, the appearance of the skin is sufficient. As soon as the oil is entirely absorbed, it should be replaced by a fresh portion, as it is important to prevent contact with the air. During the first few days the thymol spray is also applied as often as possible, which does much toward alleviating the pain.

12. *Sayre on Spina Bifida, treated with Plaster-of-Paris.*—Dr. Lewis A. Sayre, in a clinical lecture (*Chicago Med. Journ. and Exam.*) says that the object of mechanical treatment is simply to protect the parts from all pressure and all possible injury until the process of ossification is completed throughout the entire length of the spinal column. This he accomplishes by first slipping over the trunk a tightly fitting knit shirt, similar to that used in applying the plaster jacket in Pott's disease, or lateral curvature. Then, having the patient held in a firm position, but without being suspended, he passes a few turns of a plaster bandage around the trunk and pelvis in such a manner as to cover the spina bifida completely. After this, he cuts off a piece from both the top and the bottom of the shirt, and turns the remaining portions over the part covered with plaster. He then makes a few more turns of the plaster bandage outside of all, and finally, before the plaster

has had time to set, presses in the plaster with the hands on both sides of the tumour, so as to make the covering more cup-shaped, and thus protect it the more completely from all pressure. He thus makes a hard artificial roof for the spinal cord and nerves, which takes the place of the normal bony one until nature supplies the deficiency. If, on account of the child's growth, other similar plaster casings be required, they can be applied in the same manner.

13. *Nieder on Electrolysis in the Treatment of Vascular Tumours.*—In Knapp's *Archives*, March 1881, Dr. Nieder quotes some illustrative cases. In two of them, a tumour consisting of large veins exerted such a pressure on the upper eyelid that the eye could not be opened. In all instances, a complete cure was effected without any untoward symptoms. He employed from four to six cells (model of Spamer), with a key to connect or interrupt immediately. The needles may be of steel, although a platinum needle is preferable for the positive electrode, to prevent oxidation and permanent staining of the punctured spot. Both needles are introduced into the tumour, and left in place for the space of 1 to 3 minutes, whereupon the site of the negative pole is charged according to the size of the growth. The bubbles of hydrogen arising at the negative needle may disturb the tissues, but are harmless; moreover, they are readily dispelled by pressure. At each sitting a few punctures, not over five or six, are made, while the number of sittings varies according to the size and the location of the angioma. The immediate effect is hardening and shrinkage from coagulation of the blood. Some suppuration occurred in all instances but one, which resulted in loss of substance or formation of unexpected cicatrisation. Antiseptic after-treatment was maintained.

14. *Parker on a Case of Arterial Hæmatoma of the Forearm.*—Mr. R. Parker related the following case at a meeting of the Clinical Society of London (*British Medical Journal*, April 23rd). A lad, some months after an attack of rheumatic fever (during which he experienced pain in the right forearm, followed by swelling of the whole limb), was found to have an oval swelling of the forearm, tense, very slightly elastic, and without pulsation. An incision revealed a blood-tumour between the bones and deep layer of flexor muscles, and an open artery with upper and lower apertures. This vessel was tied, and, after several attacks of secondary hæmorrhage, the patient recovered. The author believed the hæmorrhage (producing the hæmatoma) to have been due to perforation of the anterior interosseous artery, where it had been blocked by an embolus.

15. *Morgan on a Case of Progressive Painful Inflammation of Arteries.* — Mr. J. H. Morgan, in a paper read before the Clinical Society of London (*British Medical Journal*, April 23), describes the case of a middle-aged man, who during some years suffered at intervals from pain extending gradually from the trunk along the course of some of the main arteries, viz., both brachials, a carotid, a femoral, and extending from it to the arteries of the leg. The retinal vessels were very unusually small, indistinct, and exhibited a double contour. There was at no time any evidence of embolism. He contracted syphilis when eighteen years of age. The symptoms, according to the author, pointed evidently to disease of an artery, probably inflammation of the fibrous coat, since the pain passed from the centre to the periphery, was in the course of the various arteries, and was made intense by pressing upon the artery affected. FREDERIC S. EVE.

PATHOLOGY.

RECENT PAPERS.

1. ARNSTEIN, C.—On Albuminous Degeneration. (*Cent. für die Med. Wissen.*, No. 13, 1881.)
2. AUFRECHT.—Discovery of the Micrococcus of Syphilis. (*Cent. für die Med. Wissen.*, No. 13, 1881.)
3. ELSENBERG, A.—Changes in the Salivary Glands in Lyssa. (*Cent. für die Med. Wissen.*, No. 13, 1881.)
4. LAFFTER.—On Softening of the Brain in Puerperal Pyæmia as the Result of Infection of Micrococci. (*Bres. Aertzl. Zeit.*, 1880, s. 205.)
5. LETULLE.—On Cardiac Lesions in Locomotor Ataxy. (*Gaz. Méd. de Paris*, 1881.)
6. CORNIL.—On the Tissue-Changes caused by Cantharidin. (*L'Union Méd.*, 1881, p. 476.)
7. LAACHE.—Pneumothorax Produced by a Concretion in a Bronchus. (*Norsk Mag. für Lägevidensk* and *Nord. Med. Arkiv*, Band xiii.)
8. DE BON.—Acute Apoplectiform Bulbar Paralysis. (*Hygeia*, 1880; and *Nord. Med. Arkiv*, Band xiii.)
9. LUND.—Cancer of the Breast and Meninges. (*Norsk Mag. für Lägevidensk*, 1880.)
10. FINNE.—Tuberculosis of the Urinary and Genital Organs. (*Norsk Mag. für Lägevidensk*, 1880.)

1. *Arnstein on Albuminous Degeneration.* — Dr. C. Arnstein of Kasan (*Central. für die Med. Wiss.*, No. 13, 1881) says he has had the opportunity of examining certain growths from the eyelids sent him by Professor Adamuk, to investigate whether they were amyloid or not. He found that some were decidedly amyloid, but others, although the tissue was translucent, gave no amyloid reaction. In some of these latter there was no cell-proliferation; in others, the degenerated parts alternated with patches of cell-proliferation with numerous giant-cells. In one case, he recognised the preliminary stage of hyaline degeneration, to which he gave the name of fibrinous degeneration. In the latter, he could distinguish, along the vessels, fibrous finely striated layers, which permeated the adventitia, and gradually became hyaline, in such a manner that the outer layers appeared already grass-like, while the inner were still finely striated. In the next stage, vessels could be seen, the wall of which appeared like thick clear glass rings or hollow tubes; the striation had completely disappeared, and the lumen of the vessel was reduced to a minimum, or quite obliterated. In the tissue itself, he could distinguish with high powers a finely fibrillated granular-looking reticulum, which, at neighbouring spots, was replaced by a bright hyaline stroma. In the narrow meshes of this stroma, nucleated cells and giant-cells were demonstrated by carmine. He has found cochineal-alum a valuable colouring agent for amyloid matter. The amyloid matter is coloured red, while, in the normal tissues, the nuclei are coloured violet, and the protoplasm and ground substance remain colourless.

2. *Aufrecht on the Discovery of the Micrococcus of Syphilis.*—Dr. Aufrecht of Magdeburg (*Central. für die Med. Wiss.*, No. 13, 1881) announces that he has discovered in syphilitic condylomata a micrococcus, which may be recognised by the following characters. The single cocci are of rather coarse grain; they are generally of the form of diplococci, or two joined together, and the number of

these is greater than of the single cocci. They are very seldom in threes. They are stained deeply by fuchsin. He has found them in six cases; but in one, where the condyloma was ulcerated, and, in another, where it had been painted with corrosive sublimate, they were very scarce. He, therefore, excludes ulcerated condylomata, or those which have been treated specifically. To obtain the micrococci, the condyloma should be incised with a lancet, and the blood sponged away; then a drop of the serous fluid that follows should be collected on a cover-glass, which is put under a bell-jar for twenty-four hours to dry. At the end of that time, a drop of a half per mille solution of fuchsin is placed on an object-glass, and the cover-glass is laid on it. The excess of fuchsin is wiped away after two or three minutes, and the object examined with Hartnack's 9A immersion-lens. To preserve the object, he puts a little dammar varnish round the edge of the cover-glass.

3. *Elsenberg on Changes in the Salivary Glands in Lyssa.*—Dr. A. Elsenberg (*Central. für die Med. Wiss.*, No. 13, 1881) has examined the salivary glands of twelve mad dogs and of two human subjects dying of lyssa. The principal changes in the dog were in the submaxillary and sublingual glands. The former, on section, were smooth, showed their acinous structure clearly, and were of a greyish-red colour. Under the microscope, the interstitial tissue was distinctly infiltrated with small cells with one or more nuclei, like colourless blood-cells. This infiltration was most marked around the medium-sized veins in the hilus of the acinus, diminished at the periphery, and was scarcely present at the hilus of the gland; in some places, the infiltration was of sufficient intensity to form a microscopic abscess. The fixed cells were slightly swollen, but showed no trace of division. The blood-vessels were filled with blood, containing many leucocytes, partly lying by the walls of the vessels, partly irregularly mixed with the coloured corpuscles. The alveolar epithelium, as well as the half-moon cells, were not unchanged. The contents of the secreting cells became, from a transparent mucous mass, at first slightly granular; then the granular mass gradually enlarged, while, at the same time, the circumference of the cell diminished by a third. The nucleus, from being flat, became round, enlarged, and, instead of lying peripherally, passed more to the centre. Such cells coloured readily with picrocarmin or hæmatoxylin; sometimes two nuclei were seen. The half-moon cells swelled up so as to fill two thirds of the alveoli; at the same time their nuclei proliferated, so that each cell contained three or more times as many nuclei as a normal cell. Besides, there were sometimes in the alveoli round cells like white blood-cells, which had penetrated from the neighbouring interstitial tissue. The same appearances were found in the middle-sized ducts; the small cells, penetrating the walls, pushed up the epithelium, loosened the connection of the cells to one another, and forced them into the lumen of the duct. Around the nervous ganglia were similar infiltrations, which sometimes penetrated the ganglia. In the sublingual gland, the changes were similar in kind but less in degree. The orbital gland in dogs, which belongs to the salivary glands, was usually very little altered. The parotid showed badly marked changes in four dogs only; the interstitial infiltration was usually moderate; the gland-cells were a little enlarged, granular, and contained two or three nuclei, and similar changes were found in the epithelium of the ducts of middling calibre. In the human subjects he found scarcely any changes in the parotid, very little in the submaxillary, which was limited to small-celled infiltration of the tissue surrounding the ducts and veins of middling calibre; the most marked changes were in the sublingual. These were less intense, but similar to those found in dogs. He concludes that these appearances are characteristic of an inflammatory process, caused by an infectious material circulating in the blood and excreted by the saliva. As the changes are most marked in the submaxillary and sublingual glands, it is probable that the saliva of these glands principally, or perhaps exclusively, secretes the specific poison. These changes are sufficiently characteristic to permit the diagnosis of lyssa in dogs, but they are too feebly marked and too like what occur in other infectious diseases, or as the result of drugs, to be of the same value in man. ROBERT SAUNDBY, M.D.

4. *Laffter on Softening of the Brain in Puerperal Pyæmia, as the Result of Infection with Micrococci.*—Two cases are given (*Breslauer Aerztl. Zeitschr.*, 1880, S. 205).—In the first, the woman was taken with pains in the abdomen eight days after delivery, these being followed by somnolence, and paralysis of the right side, extremities, and face. Death occurred three weeks after delivery. The following lesions were found at the necropsy: a pyæmic abscess of the lung, enlargement of the spleen, multiple abscesses in the kidneys, recent aortic endocarditis, and softened purulent thrombi in the plexus of veins around the vagina. In the left frontal lobe of the brain was a patch of red softening, almost as large as a hen's egg. On microscopic examination, numerous micrococcus-emboli were discovered in the vessels of the kidneys, and of the brain in the neighbourhood of the softened spot; the latter being in some cases tightly distended with colonies of micrococci, in others containing only scattered chains of micrococci arranged in a serpentine manner. In the second case, the signs of puerperal pyæmia and endocarditis were also found; and, in addition, a patch of red softening, about the size of a hazel-nut, in the right frontal lobe, and in connection with this a purulent meningitis over the convexity of the brain. The histological condition was identical with that of the first case. Clinically, somnolence only, and no local paralysis, was observed. G. H. MAKINS.

5. *Letulle on Cardiac Lesions in Locomotor Ataxy.*—Dr. Letulle publishes (*Gaz. Méd. de Paris*, 1881) two cases of locomotor ataxy, in which he met with cardiac lesions, already pointed out by M. Grasset of Montpellier. In the first of these cases, the patient, who died suddenly, had atheromatous lesions of the aorta and insufficiency of the aortic valves; in the other, there were also complex lesions of the aortic opening, and mitral lesions.

6. *Cornil on the Tissue-Changes caused by Cantharidin.* — According to M. Cornil (*Union Méd.*, 1881, p. 476), thirty minutes after the injection of a very minute dose of cantharidin, dissolved in acetic acid, into the subcutaneous areolar tissue of a rabbit, the kidneys present distinct evidence of inflammation. The Malpighian capsules are filled with leucocytes, and the epithelial lining of the convoluted tubes is altered in appearance. A little later, the cells which line the straight tubes begin to take part in the process, and a catarrh is set up in the mucous lining of the bladder. This disorder of the urinary organs and passages is the first, but not the only, result of the introduction of

cantharidin into the system. The lining membrane of the larynx, trachea, bronchi, and intestines, is likewise attacked. There is also congestion of the lungs. In all the affected organs, the inner surface of the blood-vessels exhibits signs of irritation; the epithelioid lining is swollen, and coated with a layer of adherent leucocytes. This is especially evident in the capillaries of the liver. The above changes may all be observed when the cantharidin, instead of being injected, is simply applied to a considerable area of unbroken skin.

E. Buchanan Baxter.

7. *Laache on Pneumothorax, produced by a Concretion in the Bronchus.*—This case is described in the *Norsk Magazin for Lägevidensk*, 1880 (abstract in *Nordiskt Medicin. Arkiv*, Band xiii, Häft 1). The patient, a man aged 27, had, for the last five or six years, been troubled with a very severe cough, attended with muco-purulent expectoration; it commenced in an almost convulsive manner, and had defied all treatment. At the age of two years the patient had pneumonia, but subsequently enjoyed good health. He was of strong build, and his appearance was quite healthy. Nothing abnormal was discovered in the lungs nor in the larynx. The origin of the cough was therefore obscure; it could not be explained by the presence of chronic pharyngeal catarrh. In January 1880, after exposure to cold, the patient coughed up some fœtid masses, and pneumothorax of the right side gradually developed; he died in three weeks. At the necropsy, there was found a gangrenous cavity in the middle lobe of the right lung, with an opening into the pleural cavity; the whole lobe was atrophied, the lung-substance being changed into contracted connective tissue: there was cylindrical dilatation of the bronchi. In a bronchus of the second rank, communicating with the above-mentioned cavity, was a concretion of the size of a pea; the underlying mucous membrane was ulcerated. The obstinate cough is explained by the author as having been due to the presence of the concretion, which might be regarded as consisting of indurated secretion. This, by obstructing a bronchus, produced putrid catarrh, with gangrene and perforation. The pneumonia during childhood may perhaps explain the bronchiectasis, and thereby the entire morbid process; on the ground that, through defective absorption, it gave rise to atrophy of the lung-substance, and substitution of contractile connective tissue. In discussing the case, Drs. Nicolaysen and E. Winge could not agree with this explanation, as they preferred to attribute the bronchial dilatation to the long continued catarrh.

8. *De Bon on Paralysis from Apoplexy of the Medulla Oblongata.*—Herr M. de Bon relates in *Hygeia* for 1880 (*Nord. Med. Arkiv*, Band xiii) the case of an unmarried woman, aged 48, who had, for two years had a constant dull pain in the neck, which was much increased when she bent the head forwards. In 1878, her sight began to fail. On April 2nd, 1879, she had vomiting and giddiness. On May 2nd, she had giddiness and nausea when she lay down. Afterwards, she had difficulty in speaking and swallowing; in the afternoon, she lost speech, and respiration became stertorous. The next day, there was complete paralysis of all the limbs. The face was immovable; the right eyelid was paretic, and the right pupil dilated; the left eyelid was unaffected; respirations, 60 to 80; pulse, 150; consciousness appeared to be retained. She died on the same day. At the necropsy, the coats of the basilar artery were found to be much thickened, and its lumen reduced. The same condition, but in a less degree, was found in both vertebral arteries, for the space of about one centimètre. There were no dilatations nor depressions on the outer surface of the vessel. The basilar artery was empty; at the part next the vertebral arteries was a thrombus, half a centimètre (0.2 inch) long, which extended a centimètre into the right, and a centimètre and a-half into the left vertebral artery. The pons Varolii was pale; the medulla oblongata was very pale and soft; and under the ependyma, corresponding to the eminentia teres, was a small hæmorrhagic clot, which, on section, was found to be pale, soft, and homogeneous. Several small clots were found in the cerebellum. The occipital headache, for two years, might have been due to the anæmic condition of the posterior part of the brain and meninges, in consequence of the insufficient flow of blood from the obstructed basilar and vertebral arteries. The symptoms of affection of the medulla oblongata first appeared when thrombosis of the vertebral arteries, and consequent anæmia and softening of the medulla, took place. From this time, the symptoms became distinctly marked: on the second day, all the nervous functions were thrown into a state of inaction; and the patient died, unable to speak, swallow, or move herself, but apparently quite conscious. The thrombosis occurred, possibly, nearly at the same time in both vertebral arteries, since no unilateral paralysis was observed. No microscopic examination of the vessels was made.

9. *Lund on Cancer of the Breast and Meninges.*—The following case is related by Dr. Otto Lund, in the *Norsk Magazin for Lägevidensk* for 1880. A woman, aged 59, was operated on, in October 1869, for a cancer of the right breast; and in November 1876, for a cancerous infiltration of the glands in the right axilla. In the interval, three years after the first operation, the patient—who was said to have suffered several times while young from convulsions and attacks of giddiness, and afterwards also from migraine—was again seized with giddiness, which came on, or was made worse, when she turned her head to the right, while lying in bed. The attack of giddiness passed off gradually; but, after some years, she had sciatic pains in the left lower limb, and periodical pains in the right half of the forehead, and in the right temple, with tenderness on pressure. There was no disturbance of intelligence; weakness of memory was first observed in 1880. In February she had an epileptiform attack, with loss of consciousness and tonic convulsions, during which the head and eyes were turned to the right side; after the attack, there was found to be paralysis of the upper and lower limbs. The intellect also became disturbed; and she died on March 29th, fourteen days after a similar attack to that above described. On *post mortem* examination, a cancerous nodule, of the size of a nut, was found in the left breast (this had been observed during life); there were two disc-shaped cancerous growths, respectively 5 and 3 centimètres (2 inches, and 1.2 inches) in diameter, and about half a centimètre thick, in the arachnoid in the right parietal region, and a smaller similar tumour on each side of the crista galli. There was fatty degeneration of the heart.

10. *Finne on Tuberculosis of the Urinary and Genital Organs.*—Herr G. Finne relates, in the *Norsk Magazin for Lägevidensk*, series 3, Band x (abstract in *Nord. Med. Arkiv*, Band xiii) the case of

a girl, aged 18, who had suffered for some months from pains in the region of the bladder and urethra, with frequent desire to pass urine. Occasionally, she believed that she observed a white deposit in the urine. She had generally been healthy, but now and then suffered from suppression of the menses. A short time before her illness she had coitus; there were no important symptoms of urethritis. On admission to hospital, she seemed sound and healthy. The above-mentioned symptoms continued. There was tenderness on palpation over the symphysis pubis. The urine was of a light yellow colour, turbid, with a whitish, slimy, finely divided sediment; it was alkaline, of specific gravity 1015, and contained albumen; about the normal quantities of chlorides and phosphates were present. Microscopic examination showed numerous round cells, and some red blood-corpuscles, with flattened epithelium. The symptoms were unchanged by treatment. She became affected with rigors, headache, nausea, vomiting, and hiccough. The tongue had a white deposit. The alvine evacuations were generally normal. She had pain in the middle of the hypogastrium. On the last day of her life she had several attacks of painful micturition, passing only about a spoonful of fluid blood each time. At the necropsy, the papillæ and pyramids of the kidneys were found to be the seat of cheesy infiltration; tubercles were scattered through the pelves, and the whole substance of the kidneys. The entire mucous membrane of the bladder was the seat of tuberculous ulceration. The urinary organs alone were affected. The starting-point of the disease was probably the bladder, as this organ was most extensively diseased. Connection with a tuberculous individual is suggested as having been the cause of the disease. A. HENRY, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. APOSTOLI, G.—On a New Application of Electricity in the Lying-in State. (*Ann. de Gynécol.*, May 1881.)

2. BOMPIANI, A. — Continuous Uterine Irrigation during Septic Endometritis, and the Surgical Treatment of Puerperal Metroperitonitis. (*Ann. de Ostet., Pediatria, e Ginecol.*, March, April, 1881.)

3. BREISKY.—A Case of Cæsarean Section after Porro. (*Cent. für Gynäk.*, May 14, 1881.)

4. CZERNY, V.—On the Enucleation of Subperitoneal Fibromas of the Uterus through the Vaginal Vault: Vaginal Myoniotomy. (*Wiener Med. Woch.*, April 30, 1881.)

5. VON HECKER, CARL. — On a Case of Complete Spontaneous Rupture of the Uterus, with Recovery. (*Centralbl. für Gynäk.*, May 14, 1881.)

6. KNAGGS, S. T.—Report of 660 Cases of Midwifery in Australia. (*Trans. Obstet. Soc. of Dublin*, April 2, 1881.)

7. KOCKS, J.—On Aseptic Dilatation of the Uterus by Laminaria Sticks or Sponge-Tents in India-Rubber Tubes. (*Cent. für Gynäk.*, No. 10, 1881.)

8. LABAT, E.—Clinical Experimental Researches on the Head of the Fœtus from an Obstetrical Point of View. (Paris, 1881.)

9. O'CONNELL, P.—The Duration of Normal Human Pregnancy. (*Chicago Med. Jour. and Examiner*, April 1881.)

10. QUEIREL.—On Varices during Pregnancy and Parturition. (*Ann. de Gynéc.*, May 1881.)

11. TARNIER, S.—On the External Examination of the Rectal Mucous Membrane by Extroversion. (*Ibid.*, May 1881.)

12. WERTH.—Retention of a Mature Fœtus in an Imperfectly Developed Secondary Horn of a Uterus Bicornis. (*Archiv für Gynäk.*, Band xvii, Heft 2.)

13. WITKOWSKI. — On a New Form of Craniotomy Trepan. (*Soc. de Chir., Paris, Séance*, April 27, 1881.)

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1. *Apostoli on a New Application of Electricity in the Lying-in State.*—Dr. Apostoli, during the last two years, has used electricity in all his cases, in the following way. Immediately after the delivery, an induced current is applied to the uterus, and gradually increased in intensity. This operation is repeated from eight to ten times, during about six days after normal labour. When the labour has been premature, or abortion has occurred, the current is applied from fifteen to twenty times. The object is to aid and complete the involution of the uterus, and to ward off all the complications which result from arrested or retarded involution.

3. *Breisky on a Successful Case of Porro's Operation.*—The patient, aged 28, primipara, was the subject of rickets. The pelvis was universally contracted, flat, with extreme narrowing of the conjugate. Labour had set in some hours before Dr. Breisky saw her, and the liquor amnii had escaped. It was resolved, as the fœtal heart could be heard, to deliver by Porro's operation. Listerian antiseptics were adopted. The patient being anæsthetised, the incision through the abdominal walls was made from just above the pubes, to a distance of four fingers' diameter above the navel. The uterus was drawn through the opening, secured by iron wire through the vaginal portion of the cervix, and then incised. The incision did not wound the placenta. The child, a female, weighing 2,490 grammes, was slightly asphyxiated, but soon breathed. The uterus and both tubes, with the ovaries, were removed. The peritoneal toilet was unnecessary, as no fluid had escaped into it. The abdominal wound was closed with deep silver sutures, and superficial silk sutures. No drainage-tube was used. Listerian dressing was applied. The mother and child both did well.

4. *Czerny on the Enucleation of Subperitoneal Fibromata through the Vagina.*—The author relates two cases: the first done by Sutton, in which the vaginal roof was incised, and the tumour drawn out of the peritoneum through the vaginal incision. The tumour was attached by a broad pedicle to the posterior wall of the uterus. The pedicle was cut through, and the tumour delivered by an ordinary midwifery forceps. Some small intestine protruded, which was replaced with great difficulty. Death occurred after four days. Necropsy revealed perforation of the small intestine by the manipulations employed during the operation. The second case, by Derweer, was one of large retro-uterine fibroma, pressing on the ureters, and causing retention of urine. After incision of the posterior vaginal wall, the tumour was drawn outside the vulva by a small forceps, together with the uterus, and the left ligament and ovary. The capsule of the tumour was opened, and the tumour enucleated, without cutting into the peritoneum. Silk sutures were inserted into the wound. Recovery took place at the end of six weeks. The tumour weighed 324 grammes. The author thinks the operation was unsuitable in the first case, but indicated in the second.

5. *Hecker on Rupture of the Uterus.*—The patient, aged 38, had had six normal labours. On March 26th, 1881, she was admitted into the Munich Lying-in Hospital, with marked symptoms of uterine rupture. Externally, the extremities of the child could

be felt through the abdominal walls. The firmly contracted uterus, with a soft pulpy mass close to it, could also be felt through the abdominal walls. In the vagina, the child's head was found fixed in the pelvis. Delivery was effected by the forceps. The placenta was traced by the cord through a large rent in the posterior wall of the uterus, and proved to be the pulpy mass felt through the abdominal walls close to the uterus. The child, a male, weighing 3,100 grammes (about 11 pounds), was delivered in a state of very marked rigor mortis; so much so, that it could be held out like a rigid rod from one of the lower extremities. A large drainage-tube was passed into the abdominal cavity, and allowed the escape of a quantity of liquor amnii and bloody fluid. The drainage-tube was left in until the rent had nearly closed. The patient made a good recovery.

6. *Knaggs on 660 cases of Midwifery.*—Dr. Knaggs attended personally 660 cases of midwifery from 1871 to 1880 in Newcastle, New South Wales. The patients were all of European origin or descent. The figures are, 660 cases = 668 children; males, 354; females, 314. Of these 660 cases, there were 160 primiparæ with 163 children; males, 79; females, 84; and 500 pluriparæ with 505 children; males, 275; females, 230. Twins: 8 cases; primiparæ, 2; pluriparæ, 6. Operations, 91; forceps, 88; long, 24; short, 64; vectis, 1; version, 2. Maternal deaths, 6; or 1 in 110. There were 11 still-born children, or 1 in 60; 5 of the maternal deaths resulted from puerperal fever; 1 from puerperal convulsions. In relation to cases of retained placenta, it is instructive to note that in nearly half of the cases of retained placenta, otherwise than those caused by morbid adhesion, the child was born before the arrival of the accoucheur, and in each of these cases the retention could be attributed to the want of judicious management on the part of the nurses who were present at the time of the birth of the child. [The above statistics are valuable as unimpeachable corroborative evidence of the results of Dr. McClintock's investigations into maternal mortality, which he put down at 1 in 105. Dr. Knaggs' cases, all personally attended and followed up in private practice, show almost the same death-rate. It is only such statistics as these that can be of value. The figures returned from the out-patient departments of maternity charities are untrustworthy, as it is now known and admitted that a large proportion of the patients do not remain to recover or die under the care of the student or midwife who attended the labour, but seek advice elsewhere.—*Rep.*]

9. *O'Connell on the Duration of Normal Human Pregnancy.*—Dr. O'Connell states that from all published tables regarding the duration of pregnancy, it will simply be seen that the majority of women are delivered between the 273rd and 278th day; that the mean duration of pregnancy is 275 or 276 days. Between the minimum and the maximum duration, however, there may be the very great difference of forty days. The author is of opinion that the duration of normal utero-gestation in the human female is 275 days, from the time the fecundated ovum takes up its place in the uterus to the onset of labour. He explains protracted gestation by the supposition that spermatozoa must ascend nearly or even to the ovary, there fecundate an ovum, which in turn must descend to the uterus — the ascent of the sperm-cells and the descent of the impregnated ovum occupying jointly from ten to twenty days or more. These views, in his opinion, explain the seeming prolongation in the duration of certain cases of pregnancy resulting from a single coitus at a known time.

12. *Werth on the Retention of a Fœtus in an Uterine Horn.*—Dr. Werth relates a very interesting case, operated on by Litzmann, in which the diagnosis of a decomposing fœtus in the uterus had been made. The operation was determined upon on account of the increasing suppuration and the general deterioration of the patient's health. Porro's operation was performed. During the operation, the fruit-sac ruptured underneath, and suppurating matter escaped into the peritoneum. Death on the third day. The autopsy showed that the fruit-sac was the secondary horn of a uterus bicornis, and opened by a fine aperture into the cervical canal. The mature fœtus was much macerated. The author criticises the case, especially in relation to the cause of the error in the diagnosis, and strongly advocates an early operation under similar conditions.

13. *Witkowski on a New Form of Craniotomy Trepan.*—Dr. Witkowski has invented a trepan composed of a kind of cork-screw, which fixes the cranium whilst the crown of the trepan revolves. In this way, there is no danger of slipping and wounding the maternal structures. A large circular aperture is made in the fœtal skull for the escape of the cerebral matter, and there are no projecting fragments of bone left around the wound.

FANCOURT BARNES, M.D.

PHYSIOLOGY.

KIDNEY, URINE, ETC.

RECENT PAPERS.

1. SALKOWSKI.—On the Quantitative Analysis of Chlorides in Urine. (*Centralbl. für die Med. Wissen.*, 1881, No. 10.) (Orig. Mitth.)

2. PFLÜGER, E. — On the Estimation of Urea. (Pflüger's *Archiv*, Band xxi, p. 248.)

3. RIBBERT, H.—On the Formation of Hyaline Tube-Casts. (*Centralbl. für die Med. Wissen.*, 1881, No. 17.)

4. OPPENHEIM, H.—On the Physiology and Pathology of the Excretion of Urea. (Pflüger's *Archiv*, Band xxiii, p. 446.)

5. PFLÜGER, E.—Critical and Experimental Contribution to the Estimation of Urea: an Answer to Dr. Max Gruber and Prof. Carl Vogt of Munich. (Pflüger's *Archiv*, Band xxiii, p. 127.)

1. *Salkowski on the Quantitative Analysis of Chlorides in Urine.*—For some time, the author has employed Vothard's method for the estimation of chlorides in the urine by means of rhodan ammonium in the urine, which he carries out in the following manner. Ten cubic centimètres of urine are diluted to about 60 cubic centimètres, then acidulated with 2 cubic centimètres of pure nitric acid, and decomposed with 15 cubic centimètres of the silver solution usually employed for the estimation of chlorides (1 cubic centimètre=0.01 NaCl). The mixture is then vigorously shaken until the fluid has become clear, diluted with distilled water to 100 cubic centimètres, and filtered through a dry filter-paper; 80 cubic centimètres of the filtrate are taken, and to this are added 5 cubic centimètres of a cold saturated solution of rock salt; and then the quantity of silver estimated by means of a solution of rhodan ammonium. The latter solution is to be added to the silver until the red colour no longer

disappears on shaking. The calculation is very simple.

2. *Pflüger on the Estimation of Urea.*—In this important paper, the author gives in great detail his reasons for believing that Liebig's method is liable to error to the extent of 14 per cent., and indicates certain rules whereby such error may be corrected. Expressed shortly, the principal error in Liebig's work, according to Pflüger, is, that he assumes that if one have a solution of a substance A, and to it add the solutions of a second substance B, and of a third C, both of which have a chemical action upon A, the result is identically the same, whether B or C be the first to be added, which is not the case. Into the details of Pflüger's method (which he calls the static method) it is not possible here to enter. It depends in great measure upon accuracy of preparation, and upon the care with which the solutions required in the analysis are prepared. Very full directions are given in the original paper.

3. *Ribbert on the Formation of Hyaline Tube-Casts.*—The author has already advanced the hypothesis that hyaline tube-casts are formed from altered albumen which has transuded into the glomeruli. This coagulation of albumen in the convoluted tubules he believes to be brought about by reason of the acid reaction of the urine. In order to prove this, he makes certain observations, proceeding upon the hypothesis that, if the acid reaction of the contents of the tubules so acted, then the artificial acidulation of the contents of the glomeruli by the injection of acids into the blood would cause a coagulation of the albumen in the Malpighian tufts. In each of two rabbits he clamped one renal artery, and, after an hour and a half, he injected 20 to 30 grains of a 2½ per cent. solution of acetic acid into the jugular vein. In the one animal, the kidney was extirpated thirty minutes after the operation; in the other, one hour. In both cases, hyaline masses of coagulated albumen were found in the glomeruli.

4. *Oppenheim on the Physiology and Pathology of the Excretion of Urea.*—The observations detailed in this important paper (a prize essay) were chiefly made upon the author himself, after the following manner. He was at pains to bring himself into such a condition that the quantity of urea excreted in the twenty-four hours remained nearly constant, and the urine and fæces contained as much nitrogen as reached the body in the form of aliment. The urea-estimations were performed according to Liebig's method; and he believes that the results were free from the sources of error which, according to Pflüger, may occur in such analysis. During the first seven days, the quantity of urea excreted varied from 32 to 35 grammes in the twenty-four hours. The average hourly excretion of urea was 1.42 grammes. In the night (that is, in the hours after an albuminous meal) it stood at 0.13 gramme per hour over the average. The urea left the body in a solution which was never near saturation, but there was a distinct relation between the water and the urea excreted; so that, other things being equal, when the quantity of water passed was greater, the quantity of urea which it contained was also increased. The taking of coffee, while producing diuresis, caused a diminution in the quantity of urea, but along with this there was an increase in nitrogenous elimination by the bowel. Quinine caused an increase of the elimination of urea in the twenty-four hours to the extent of 4 grammes. This action began soon after taking the dose (2 grammes), and lasted for about twenty-four hours. The use of pilocarpin showed that the artificial production of great perspiration and salivation did not bring about any remarkable elimination of nitrogenous material from the body.

J. GRAHAM BROWN, M.D.

SYPHILOGRAPHY.

RECENT PAPERS.

1. MARTINEAU. — Lectures on the Therapeutics of Syphilis. (*L'Union Méd.*, Sept. 16, 18, 25, Oct. 2, 1880.)

2. LANG.—On the Frequency and Precocity of Syphilitic Affections of the Nerve-Centres, and on Meningeal Irritation in Early Syphilis. (*Wiener Med. Woch.*, 1880, No. 50.)

3. WAGNER. — Constitutional Syphilis, and the Diseases of the Kidney which depend upon it. (*Deutsches Arch. für Klin. Med.*, 1880, Band xxviii, Heft 2.)

4. CUBE.—Contribution to the Study of Syphilis of the Lung. (Virchow's *Archiv*, 1880, Band lxxxii, Heft 3.)

5. BERMANN.—The Fungus of Syphilis. (*Arch. of Med.*, 1880, December, p. 263.)

6. MAURIAC.—On Excision of the Syphilitic Chancre. (*Gaz. des Hôp.*, 1881, Nos. 7, 10, 14.)

7. GREENOUGH. — Herpes Progenitalis. (*Arch. of Derm.*, Jan. 1881, p. 1.)

8. STURGIS.—A Case of Gummatous Infiltration of the Inguinal Glands. (*Boston Med. and Surg. Journ.*, Feb. 3, 1881.)

9. TERRILLON.—On the Pathological Anatomy and Pathogeny of Gonorrhœal and Urethral Epididymitis. (*Bull. et Mém. de la Soc. de Chir.*, 1881, No. 2, pp. 119, 155.)

10. APOLANT. — On the Transmissibility of Syphilis from the Child to its Mother. (*Berl. Klin. Woch.*, 1881, No. 6.)

3. *Wagner on the Diseases of the Kidney which depend on Constitutional Syphilis.*—In the *Deutsches Archiv für Klin. Med.*, 1880, Band xxviii, Heft 1, S. 94, Dr. E. Wagner discusses the affections of the kidney which occur in connection with syphilis. Besides quoting from the writings of Rayer, Spiers, Beer, Bamberger, and others who have written on this subject, the author gives notes of sixty-three cases which have come under his own observation. With the exception of three cases of acute nephritis, which recovered, the notes refer to the appearances found after death. The author does not venture to decide whether all the cases were exclusively due to the syphilis in connection with which they occurred, and considers that the subject needs further investigation before the exact relation of syphilis to disease of the kidney can be decided, at least as regards the examples of Bright's disease. In connection with this subject, it must also be mentioned that the author does not believe in the causation of disease of the kidney by mercury. The 63 cases include 8 of acute Bright's disease, 4 of subacute or chronic Bright's disease, 7 of granular kidney, 6 of unilateral atrophy of the kidney, 35 of amyloid degeneration, and 3 of syphiloma of the kidney. In the first case of acute nephritis, the patient, a man aged 19, who had had scarlatina in childhood, was suffering from syphilitic roseola, general glandular enlargement, and sore-throat, when he first came under observation. There were also general œdema of the body and scanty urine of high specific gravity, containing blood-corpuscles and hyaline casts. The patient was

treated by mercury, iodide of potassium, and pilocarpin. He completely recovered in about ten weeks. The other cases present no features worthy of especial note. The disease of the kidney occurred in syphilitic persons, but, except in the cases of gumma, the lesions of the kidney did not materially differ from those found in non-syphilitic subjects. The cases of syphiloma have all been previously published. The author concludes his paper with a list containing references to most of the cases of gumma of the kidney hitherto recorded.

5. *Bermann on the Fungus of Syphilis.*—Dr. Bermann of Baltimore describes (*Archives of Med.*, Dec. 1880, p. 263) certain microscopic growths which he found in syphilitic primary sores, and which he believes to be peculiar to that disease. The author begins by quoting Klebs' experiments on the subject, and states that, before the publication of that observer's views, he had already discovered certain fungoid growths in a freshly excised prepuce obtained from Zeissl. What first attracted Dr. Bermann's attention was a singular collection of micrococci and fungoid growths, firmly adhering to and partly filling up the lumen of most of the lymphatic vessels. Some of the arteries also contained these growths, intermixed with blood-corpuscles. The growths were found in all of the hundreds of sections made by the author. The micrococci are small, strongly refracting spherical bodies, and resemble those illustrated by Klebs; but the bacteria, described by the same observer, Dr. Bermann found only in a few instances, and then only in the arteries. The principal changes take place in the lymphatics, and chiefly in those at some distance from the initial sclerosis, which explains, according to the author, why others have been unsuccessful in discovering these organisms.

6. *Mauriac on Excision of the Syphilitic Chancre.*—M. Mauriac reports (*Gazette des Hôpitaux*, 1881, Nos. 7, 10, 14) seven carefully recorded cases in which he excised the initial lesion of syphilis. In six, excision was performed at periods varying from four to sixteen or eighteen days after the appearance of the sore. In the seventh case, the initial lesion was excised about fifty hours after it had been first noticed, and before there was the least trace of glandular enlargement; but in this, as well as in all the others, the operation was unsuccessful in preventing further development of the disease.

7. *Greenough on Herpes Progenitalis.*—Dr. F. B. Greenough, of Boston, in a long paper on this subject (*Arch. of Derm.*, Jan. 1881), defines herpes progenitalis as an acute vesicular affection occurring on the genital organs. The vesicles are rarely less than two in number, or more than twelve; usually there are four to six. They vary from the size of a pin's head to that of a small pea. When multiple, they are apt to coalesce. The seat of the eruption is, in order of frequency, the sulcus, the inner surface of the prepuce, the glans penis, the margin of the prepuce, and the sheath of the penis. The author states that he has not found any record of the occurrence of herpes progenitalis in women, and that he himself has only seen one (doubtful) case. Herpes generally occurs in men from twenty to thirty years old. The author has never seen it after forty years of age. As regards etiology, Dr. Greenough has never seen herpes progenitalis when the patients had not previously suffered from venereal disease. [The reporter has seen a case in which the patient denied ever having had sexual intercourse.] Doyon says chancre is the disease that most frequently gives rise to herpes; next, gonorrhœa; and lastly, syphilis. Dr. Greenough considers gonorrhœa to be the most frequent cause. Herpes is most often seen in those who have long foreskins. Many who suffer from it have an attack after every sexual indulgence. Herpes is a disease *sui generis*, and has nothing to do with herpes facialis, or zoster. There is no evidence that it results from any general constitutional cause. As regards treatment, the author thinks circumcision useful in some cases, as, in the instances in which he has had recourse to that operation, the patients rarely had more than one or two attacks afterwards. The most important characteristics of the disease are: Its tendency to relapse; the very great frequency with which it is preceded by coitus; that it is rarely, if ever, found in those who have never had any venereal trouble; and that it is confined to periods of youth and early manhood.

8. *Sturgis on Gummatous Infiltration of the Inguinal Glands.*—Dr. F. R. Sturgis relates (*Boston Med. and Surg. Journ.*, Feb. 3, 1881) the case of a gentleman who consulted him on December 13, 1879, for a swelling in the right groin. The patient denied having had syphilis, and there had been no injury to the part. There was neither sore on the penis nor discharge from the urethra. There was a tense brawny swelling in the groin, which was painless, and the skin was not red. A few days later, a similar but smaller swelling appeared in the left groin. Iodine was applied locally. On Jan. 1, 1880, the swellings were painful, and there was a soft spot at the middle of each. A few days after this, a pustular syphilide appeared, and spread rapidly from the ankles to the waist, in spite of ten-grain doses of iodide of potassium three times a day. The pustules subsequently became ulcers covered by scabs. The iodide was gradually increased to 50 grains three times a day, and the oleate of mercury (20 per cent.) was rubbed in. Under this treatment the inguinal swelling became reduced in size without bursting, and the eruption slowly improved. More rapid improvement occurred under the green iodide of mercury. Cicatrices were left after the fall of the scabs.

9. *Terrillon on the Pathological Anatomy and Pathogeny of Gonorrhœal and Urethral Epididymitis.*—In a paper lately read before the Société de Chirurgie (*Bull. et Mém. de la Soc. de Chir.*, 1881, No. 2, pp. 119, 155), M. Terrillon details his views on this subject, derived from a study of cases observed by himself and others, and of experiments made by himself on dogs, by injecting irritating fluids into the vas deferens. 1. *Pathological Anatomy.*—There are four different degrees of inflammation of the vas deferens. (*a.*) In the first, the mucous membrane is alone attacked, and presents all the characters of catarrhal inflammation. The epithelium loses its cilia, and the submucous tissue becomes swelled and infiltrated with lymph-corpuscles. The vas deferens is not altered perceptibly when examined externally, and, therefore, this degree of inflammation cannot be recognised clinically. (*b.*) Much more frequently the inflammation extends to the fibro-muscular walls of the vas deferens, which becomes swollen to two or three times its normal size. The blood-vessels and lymphatics are also much dilated. (*c.*) The inflammation may spread to the cellular tissue of the spermatic cord, when the whole becomes welded into a mass, of which the various constituents cannot be recognised. (*d.*) The inflammatory process may reach the connective

tissue and scrotum. During the course of the inflammation, the vas deferens contains a yellow fluid, with a large number of pus corpuscles, and a smaller number of large granular cells. Spermatozoa are at first present, but disappear if the inflammation be prolonged. The tail of the epididymis is the part chiefly attacked. On section, the colour is greyish-green; the tubes are mostly dilated, and little foci resembling abscesses are seen. The intertubular connective tissue is increased, hardened, and infiltrated with lymphatic cells and pigment-granules. In the body of the epididymis the changes are less marked, and still less so in the globus major. No appreciable alteration, except congestion, takes place in the testis proper. The tunica vaginalis is always affected in acute epididymitis, by the formation of false membranes and the effusion of serum. 2. *Results and Termination.*—The phenomena disappear in the inverse order of their appearance. In about a month, the globus minor and vas deferens only remain affected. The latter remains thickened for several months. The author does not agree with Gosselin, who is of opinion that the excretory duct becomes blocked. Terrillon thinks that obliteration is not necessary to explain the absence of spermatozoa; but that their absence is due in many cases to a modification of secretion—in short, to a persistent catarrh of the mucous membrane of the vas deferens and globus minor. In his experiments on dogs, the author found the spermatozoa absent, or nearly absent, from an early stage of the inflammation, and before obliteration had had time to take place. 3. *Development of Epididymitis.*—The sole theory which is admissible, and proved by pathological anatomy and by experiment, is the propagation of the inflammation along the ejaculatory ducts and vas deferens. All clinical facts accord with this, viz., first, the appearance of epididymitis at the time when the inflammation has reached the prostatic region; second, the occurrence, in most cases, of swelling and pain in the course of the vas deferens before the epididymis itself becomes affected. The theory of metastasis is untenable. ARTHUR COOPER.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

1. CULLERE.—A Case of Convulsive and Vesanic Hysteria cured by Metallotherapy. (*Ibid.*, Nov. 1880.)
2. BRUNET.—Case of Paralysis with Epilepsy. (*Ibid.*)
3. MABILLE.—Albuminuria in Epilepsy. (*Ibid.*)
4. BRUNET, DANIEL.—On Increase of Fibrine in the Blood in Pericerebritis. (*Ibid.*, Jan. 1880.)
5. WITKOWSKI, L.—Some Remarks on Epilepsy. (*Allgemeine Zeitschr. für Psych.*, Band xxxvii, Heft 2.)
6. WARNER, FRANCIS.—Recurrent Headaches in Children. (*Brain*, Oct. 1880.)
7. JAMIESON, JAMES.—Nervous Diseases in Victoria. (*Ibid.*)
8. BRAMWELL, BYROM.—Case of Progressive Muscular Atrophy with Unilateral Atrophy of the Tongue. (*Ibid.*)
9. SHAPTER, LEWIS.—On Functional Athetosis and Inco-ordination of Movement. (*Ibid.*)
10. URQUHART, A. R.—Case of Congenital Absence of the Corpus Callosum. (*Ibid.*)
11. JACKSON, J. HUGHLINGS.—On Temporary Paralysis after Epileptiform and Epileptic Seizures; a Contribution to the Study of Dissolution of the Nervous System. (*Ibid.*, Jan. 1881.)
12. FERRIER, DAVID.—Cerebral Amblyopia and Hemiopia. (*Ibid.*)
13. RATTON, J. J. L.—Tetanus. (*Ibid.*)
14. MERCIER, CHARLES.—A Case of Epilepsy. (*Ibid.*)
15. FRASER, DONALD.—Case of Hemiplegia and Hemianæsthesia in an Idiot Boy, as the Result of Paralysis of the Left Cerebral Hemisphere. (*Ibid.*)
16. JONES, C. HANDFIELD.—An Obscure Case of Brain-Disease. (*Ibid.*)
17. JACKSON, J. HUGHLINGS.—On a Case of Recovery from Organic Brain-Disease. (*Brit. Med. Jour.*, Oct. 23, 1880.)
18. WATSON, J. ADAM.—Epilepsy. (*Ibid.*, Oct. 30, (1880.)
19. HUTCHINSON, J.—On Structural Diseases induced through the Influence of the Nervous System. (*Ibid.*, Dec. 11, 1880.)
20. BROWN-SÉQUARD, C. E.—Remarks on some of the Physiological and Pathological Influences of the Nervous System on Nutrition. (*Ibid.*)
21. FERRIER, D.—Tumour under the Left Lobe of the Cerebellum. (*Ibid.*)
22. SAWYER, JAMES.—Note on the Treatment of Chorea. (*Ibid.*, Dec. 18, 1880.)
23. WALSHAM, W. J.—A Case of Epileptiform Neuralgia treated by Stretching the Infraorbital Nerve. (*Ibid.*, Dec. 25, 1880.)
24. FOX, ARTHUR W.—Case of Progressive Muscular Atrophy, with Bulbar Paralysis. (*Ibid.*, Jan. 15, 1881.)
25. STEWART, T. GRAINGER.—On Peripheral Paralysis. (*Ibid.*, Jan. 22, 1881.)
26. MORGAN, J. E.—Idiopathic Lateral Sclerosis. (*Ibid.*, Jan. 29, 1881.)
27. DAY, W. H.—On Some Varieties of Nervous Headache. (*Ibid.*, Feb. 12, 1881.)
28. BENNETT, A. HUGHES.—Chronic Hemiplegia originating during the Puerperal State. (*Ibid.*, Feb. 19, 1881.)
29. JOHNSON, G.—Three Cases of Hæmorrhage into the Pons Varolii, with Clinical Remarks. (*Ibid.*)
30. BUZZARD, THOMAS.—On the Affection of Bones and Joints in Locomotor Ataxy, and its Association with Gastric Crises. (*Ibid.*, March 5, 1881.)
31. MANN, E. C.—A Case of Paralysis Agitans cured by Central Galvanisation, Sodium Bromide, and Hyoscyamus. (*Jour. of Nervous and Mental Disease*, New York, Jan. 1881.)
32. BERRIDGE, W. A.—Abscess of the Cerebellum. (*Lancet*, Sept. 4, 1880.)
33. JACKSON, J. HUGHLINGS.—On Auditory Vertigo. (*Ibid.*, Oct. 2, 1880.)
34. BALL, B.—Hemianæsthesia Removed by Static Electricity. (*Ibid.*)
35. ROBINSON, T.—Cerebro-spinal Meningitis; Death and Necropsy. (*Ibid.*, Oct. 16, 1880.)
36. GOWERS, W. R.—Five Cases of Locomotor Ataxy in one Family. (*Ibid.*, page 618.)
37. BUZZARD, T.—On 'Tendon-reflex' as an aid to Diagnosis in Diseases of the Spinal Cord. (*Ibid.*, Nov. 27 and Dec. 4, 1880.)
38. SOUTHEY, REGINALD.—The Interdiagnosis of Insensibility from Various Causes. (*Ibid.*, Dec. 4, 1880.)
39. BUZZARD, T.—Cases of Acute Atrophic Paralysis in Infants and Adults. (*Ibid.*, Dec. 11 and 25, 1880.)
40. JACKSON, J. HUGHLINGS.—Eye-Symptoms in Locomotor Ataxy. (*Ibid.*, Dec. 18, 1880.)
41. GOWERS, W. R.—Syphilis and Locomotor Ataxy. (*Ibid.*, Jan. 15, 1881.)
42. SEATON, EDWARD.—Case of Cerebral Abscess. (*Ibid.*)
43. BUZZARD, T.—Differential Diagnosis between Certain Hysterical Conditions and Myelitis. (*Ibid.*, Jan. 22, 1881.)
44. BURMAN, C. C.—Case of Traumatic Tetanus treated with Calabar Bean. (*Ibid.*, Jan. 29, 1881.)
45. RAMSKILL, J. S.—On the Treatment of some Forms of Epilepsy. (*Ibid.*, Feb. 26, 1881.)

46. BOMFORD, G.—Nerve-Stretching in Anæsthetic Leprosy. (*Ibid.*)

47. LAWRIE, E.—Case of Anæsthetic Leprosy treated by Stretching of both Ulnar and both Sciatic Nerves. (*Ibid.*, March 12, 1881.)

48. JACKSON, J. HUGHLINGS.—On the Relation between Optic Neuritis and Intracranial Disease. (*Ibid.*, March 19, 1881, p. 462.)

49. REINHARD.—On the Action of Hyoscyamin in the Insane and in Epileptics. (*Berl. Klin. Woch.*, Feb. 28, 1881.)

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2. *Brunet on a Case of Epilepsy and Paralysis.*—This case is recorded in the *Annales Méd.-Psychologiques*, Nov. 1880. A man, who had been epileptic for years, was seized somewhat suddenly with paralysis of the left arm, and died in sixteen days. The interest of the case lies in the fact that a hæmorrhagic focus occupied exactly the situation where the motor centre is seated which presides over the left arm; that is, the upper part of the ascending frontal convolution, the anterior part of the paracentral lobule, and one to two centimètres of the first frontal convolution. The visceral membranes around this area were adherent; over it they were engorged with black blood. The cortical substance was almost lost, being replaced by a cellulo-vascular tissue, mixed with small clots of blackish blood. The white matter beneath was slightly softened. The fissure of Rolando and the ascending parietal convolution were intact.

3. *Mabille on Albuminuria in Epilepsy.*—Dr. Mabille stated before the Société Médico-Psychologique (*Annales Méd.-Psychol.*, Nov. 1880) that, owing to the contradictory results obtained by various observers on this subject, he had carefully examined the urine of thirty-eight epileptics (twenty men and eighteen women). The urine passed several days previously to the accession of the fits, at the times of the fits, and for several days after the fits, was respectively tested. Notwithstanding the minutest care, albumen was detected only in one case, and the patient in question had all the clinical signs of parenchymatous nephritis.

4. *Brunet on the Increase of Fibrine in the Blood in Pericerebritis.*—The author gives the results of his researches on this subject in the *Annales Méd.-Psych.*, for Jan. 1881. He relates four cases, and concludes that general paralysis, like any other chronic inflammation, does not increase the amount of fibrine in the blood when it follows a slow and regular course; in some cases, the quantity may even be diminished. When, however, the inflammatory processes become very intense, and pass into the acute stage, then augmentation of fibrine is always observable.

5. *Witkowski on the Classification of Epilepsy.*—The author divides (*Allg. Zeitschr. für Psych.*, Band xxxvii, Heft 2) epilepsy into three great groups. The first group consists of 'rudimentary fits'. These are of very short duration; often only one element of the fit appears to be developed (convulsion, vertigo, or loss of consciousness), but, as a rule, this is due to one symptom being strongly marked, and the others only very slightly developed; they are seldom altogether absent. The second group consists of 'regular fits'; epileptic fits in the narrowest sense of the term. The third class comprises those cases in which attacks of the first, second, or both kinds occur in combination with other, mostly psychic, disturbance; these are called 'combined fits', and are subdivided into 1, a simple succession of ordinary fits; 2, the epileptic fever, *status epilepticus febrilis*, etc.; 3, subacute ditto, *status epilepticus afebrilis;* 4, conditions with preponderance of psychic symptoms. It is admitted that sharp lines of demarcation cannot be drawn between the above groups, but that each passes gradually into others.

6. *Warner on Recurrent Headaches in Children.*—Special attention is directed in this paper (*Brain*, Oct. 1880) to the condition of the muscular system as indicating the existence of headache. The facial expression of headache would seem to be chiefly due to a loss of tone in the orbicularis palpebrarum muscle; it may often be instantaneously removed by causing laughter, and thus energising the orbicular muscle. Interesting observations are also given concerning a peculiar muscular condition of the hand, observed in neurotic children. When the child stands up, holding his arms horizontally forwards, with hands pronated and fingers extended, the wrist drops slightly, the phalanges are extended backwards upon the metacarpus, the second phalanges are slightly flexed, and the distal either flexed or in a straight line with the middle phalanx; the thumb is usually extended backwards. The author suggests that this 'nervous hand' is almost the antithesis of that often seen in men when speaking earnestly, and which is expressive of force and energy. A large proportion of the author's cases of recurrent headache showed flattening of the teeth upon their edges, as a result of tooth-grinding. Heredity and rickets markedly predispose to this neurotic condition.

7. *Jamieson on Nervous Diseases in Victoria.*—This paper (*Brain*, Oct. 1880) is based upon an examination of the deaths registered as due to nervous disease during a period of twenty years. The interest of the article is almost purely statistical.

8. *Bramwell on a Case of Progressive Muscular Atrophy.*—The interest of this case (*Brain*, Oct. 1880) lies in the fact that the degenerative process had extended upwards from the spinal cord to the medulla oblongata and pons, but had not caused glosso-labial paralysis, as is usual. The only nerve-nuclei which had apparently become involved were the ninth (hypoglossal), as evidenced by atrophy of right half of the tongue; and the seventh (facial), producing some wasting of the right cheek.

9. *Shapter on 'Functional' Athetosis.*—Dr. Lewis Shapter describes, in *Brain*, Oct. 1880, the case of a boy, aged 7, who was the subject of left-sided athetosis. The affection was first noticed at the age of 3 months, and was supposed to be connected with the formation of an abscess in the arm which had followed vaccination. The term 'functional' athetosis is applied to the case, inasmuch as the disease was not connected with, or preceded by other disease of the nervous system. [Dr. Shapter states that this is the first case of athetosis occurring as a primary affection which has been recorded. Although he mentions the paper by Dr. Claye Shaw in vol. ix of the *St. Bartholomew's Hospital Reports*, he does not appear to recognise the fact that the cases there described are really cases of congenital athetosis, in which the slight degree of co-existent imbecility must be regarded as secondary to the motor affection.—*Rep.*]

11. *Jackson on Temporary Paralysis after Epilepsy.*—Dr. Hughlings Jackson (*Brain*, Jan. 1881), by many and powerful arguments, supports, elaborates, and we may say, establishes, the theory of Todd and Alexander Robertson, that temporary post-epileptiform paralysis depends on temporary central ex-

haustion, consequent on the excessive discharge during the paroxysm. Previous observation has shown that local temporary paralyses most usually occur after epileptiform seizures (the spasm commencing in the terminal part of a limb, or in the side of the face), as distinguished from epilepsy proper. Dr. Hughlings Jackson now shows that, in accordance with Todd and Robertson's theory, paralysis also occurs after true epilepsy; it is distributed over all parts of the body, and has hitherto been regarded as weakness, prostration, coma, etc. When the nervous discharge is partial in its distribution; when, for example, one limb only is affected thereby, that particular limb will suffer from the paralysis due to central nervous exhaustion in the paths or centres most intimately connected with it. If the nervous discharge be distributed along various paths to the whole of the body, then the whole body will be affected by the resulting central nervous exhaustion.

12. *Ferrier on Cerebral Amblyopia and Hemiopia.*—In this paper (*Brain*, part xii), Dr. Ferrier furnishes material aid in explaining away the differences which have been hitherto apparent between the facts of clinical medicine and pathology, and those of physiological experiment, with regard to the relations of the eyes to the cerebral hemispheres. From numerous facts and arguments, the author arrives at the conclusion 'that there is a twofold relation between the eyes and the cortical visual centres; the one mainly cross—the central portion of the retina probably bilaterally represented—by the angular gyrus; the other bilateral—the corresponding side of both retinæ being represented—by the occipital lobe, not alone, however, but in conjunction with the angular gyrus'. From the nature of the impairment of vision existing in cerebral hemianæsthesia of organic origin, and which is due to lesion of the posterior segment of the internal capsule, external to the optic thalamus, the author concludes that the fibres which pass through the segment are specially in relation with the angular gyrus, and represent the opposite eye as regards those functions which are affected in hemianæsthesia. In cases of hemiopia, where central vision is retained for some degrees on all sides of the point of fixation, Dr. Ferrier considers that the cause is cerebral, not peripheral. In relation to this subject, numerous cases are discussed, and three unpublished ones are related.

13. *Ratton on Tetanus.*—In a previous paper (see LONDON MEDICAL RECORD, 1880, p. 181), Surgeon-Major Ratton arrived at the conclusion that peripheral nerve-irritation in some part of the body is invariably a factor in the causation of tetanus. He now (*Brain*, part xii), assuming that the nerves implicated in tetanus are the ordinary motor or mixed nerves, endeavours to ascertain what is the nature of the irritation; whether mechanical (tactile) or pathological (painful), or a combination of both. He adopts the view that external impressions are conveyed by the nerves simply as vibrations; that the nerves are, in one sense, merely conductors of vibrations, though they have other higher functions as well. This view is only held with reference to the centripetal nerves. Pain is considered to be an affection of the vaso-motor nerves, and, being thus connected with the disturbance of the capillary circulation, and not with peripheral irritation of the cerebro-spinal axis, plays a very subordinate part (if any) in the causation of tetanus. As a matter of fact, pain and inflammation are generally absent from the wound which causes tetanus. Neuralgia affecting peripheral nerves never ends in tetanus. For these and similar reasons, pain may for the present be disregarded, and tactile irritation must be studied to elucidate the etiology of tetanus.

14. *Mercier on Epilepsy.*—A case of epilepsy is admirably reported (*Brain*, part xii), with special reference to the views recently put forward by Dr. Hughlings Jackson (see LONDON MEDICAL RECORD, 1881, p. 36). The epileptic attack began with true vertigo, and was associated with right-sided spasm, objects being apparently displaced to the right. Thus far Dr. Hughlings Jackson's theory is supported, but this is not the case with regard to the following particulars. There was no sort of aphasia after the fit; vague complex reminiscence occurred in association with right-sided spasm at the outset, and also in combination with the objective warning of vertigo. The patient was right-handed. Other interesting points in the case are noted and discussed.

18. *Watson on the Treatment of Epilepsy.*—Following Brindley James (see LONDON MEDICAL RECORD, 1881, p. 37) Mr. Adam Watson now records a case (*Brit. Med. Jour.*, Oct. 30, 1880) of the cure of epilepsy by large doses of potassium bromide. A man, aged 23, had been epileptic from childhood, rarely passing a month without a fit. For two or three months before the treatment commenced the fits had been very frequent. Thirty grains of bromide were taken thrice daily for a fortnight, and then about twice a week for another month. Occasional aperients were also taken during the six weeks. Since this treatment, three years and a half ago, the patient has been perfectly well.

22. *Sawyer on the Treatment of Chorea.*—Arsenious acid is strongly recommended (*Brit. Med. Jour.*, Dec. 18, 1880) as being by far the best remedy for chronic chorea; and it is pointed out that the dose of liquor arsenicalis, as laid down in text-books, is too small. The quantity given should be cautiously increased. One exceptional case is mentioned, in which the dose was experimentally increased until as much as a drachm of Fowler's solution was given thrice daily, apparently with good effect on the chorea, until signs of gastro-intestinal irritation were produced.

24. *Fox on a Case of Progressive Muscular Atrophy with Bulbar Paralysis.*—The case of a blacksmith, who did a large amount of manual work, and in whom the disease was at first most marked in the right hand and arm, is related in the *Brit. Med. Jour.*, Jan. 1881. A comparatively rapid course and an extreme degree of myosis were noticeable features.

26. *Morgan on Idiopathic Lateral Sclerosis.*—Three cases are related by the author in the *Brit. Med. Jour.*, Jan. 29, 1881. The disease has been described by Erb under the name of 'spasmodic spinal paralysis', and by Charcot as 'tabes dorsal spasmodique'. Erb believes the disease to consist essentially in a primary sclerosis of the lateral columns, especially of their posterior divisions, gradually advancing from below upwards. One of Dr. Morgan's cases terminated fatally, and the *post mortem* examination of the cord seems fully to endorse this view. Professor Charcot has examined some of the specimens, and states that, as far as he knows, this is the first case recorded in which examination has demonstrated lesions confined to the lateral columns of the spinal cord, without participation of either the grey matter or the posterior column. Two of Dr. Morgan's cases seemed to be

clearly attributable to prolonged exposure to cold and wet. The third case was apparently hereditary, one brother and two sisters of the patient having become similarly affected at about the same age. All the cases began gradually, without any sudden attack. Weakness of the legs was the first symptom noticed; manifestations of motor irritation followed later. Attention is drawn to inability to walk backwards as a feature in the spastic gait, which has not apparently been previously noted.

28. *Bennett on Chronic Hemiplegia originating during the Puerperal State.*—In a clinical lecture on this subject, which appears in the *Brit. Med. Jour.*, Feb. 19, 1881, six cases are brought forward, in which chronic hemiplegia had commenced suddenly, at times varying from the third month of pregnancy to three weeks after labour. In no case was albuminuria present. The author's conclusions are, that all the cases were due to a destructive lesion in that part of the brain which is supplied by the middle cerebral artery; that the puerperal state was the predisposing cause of the disease; that the exciting cause was probably an embolus; that the embolus was the result of acute endocarditis, or due to the hyperinotic state of the blood, or possibly to both conditions combined.

30. *Buzzard on Joint-Affections in Locomotor Ataxy.*—Following up previous communications on this subject, Dr. Buzzard now relates (*Brit. Med. Jour.*, March 5, 1881) four additional cases of this nature. He has been specially struck by the frequency with which the '*crises gastriques*' of Charcot occur in patients who are also the subject of affections of the bones or joints. It is suggested that the gastric crises are due to an invasion of the roots of the vagi, by the extension upwards of the inflammatory changes of the posterior root-zones of the cord. This, and the frequent coincidence of gastric crises with the osseous lesions, gives reasonable ground for the hypothesis that the latter may depend upon an invasion of a part of the medulla, closely adjacent to the roots of the vagi. The discovery in this situation of a trophic centre for the osseous and articulatory system would materially help to explain the association of cardiac and articular affections in acute rheumatism, as well as the sweating characteristic of that disease, and the occasional hyperpyrexia which occurs in it.

31. *Mann on the Cure of 'Paralysis Agitans'.*—The symptoms (*Jour. of Nervous and Mental Disease*, Jan. 1881) had developed gradually in an active woman, aged 50, and were ascribed to domestic unhappiness and grief. Trembling was incessant, and involved all the limbs; a condition of 'subacute mania' was also present, with delusions of suspicion, dread, fear of persecution, hallucinations of sight and hearing. There were exacerbations of trembling 'due to emotional disturbance'. The treatment consisted in warm baths, with cold affusion to the head at night, a milk diet, aperients, perfect quiet, drachm doses of sodium bromide, and tincture of hyoscyamus thrice daily. Electricity, in the form of central galvanisation and also a bitemporal current, was employed. During two months of this treatment, both mental and motor trouble gradually disappeared. A month's tonic regimen completed the recovery. [The case would appear to have been one of *melancholia activa*, with the motor symptoms developed, perhaps, in an unusual degree.—*Rep.*]

34. *Ball on the Treatment of Hysteria by Static Electricity.*—The case is related (*Lancet*, Oct. 2, 1880) of a girl, whose hysteria was ascribed to her having habitually been 'magnetised' by her mistress for amusement. Somnambulic sleep was easily induced. The patient said she could put herself to sleep by joining her hands and exerting her will. Hysterical attacks became frequent, and were complicated by choreic movements and right hemianæsthesia. All kinds of treatment, including the continuous and faradaic currents, were tried without any good effect. One day the patient was placed upon an insulating stool, and subjected for twenty minutes to the influence of the negative fluid of Nairn's static electrical machine. At this time she fell to the ground, but rose completely free from anæsthesia. There was no *transfer*, both sides remaining in the normal condition. The symptoms relapsed after an interval of a complete month, during which the patient enjoyed perfect health. Dr. Ball considers that the facts, as at present known, justify the use of static electricity in cases of hysteria, with or without hemianæsthesia.

37. *Buzzard on Tendon-Reflex as an Aid to Diagnosis.*—In considering the relations of the phenomenon of tendon reflex to the various diseases of the spinal cord (*Lancet*, Nov. 27 and Dec. 4, 1880), Dr. Buzzard provisionally assumes that the contraction of a muscle which follows a blow upon its tendon is of the nature of a reflex action. This is hardly in accordance with the latest views arrived at on this subject (see LONDON MEDICAL RECORD, 1878, p. 101, and 1880, pp. 81 and 308); but Dr. Buzzard desires that clinical facts should have due prominence at the present juncture, believing that they make out a strong *primâ facie* case in favour of the reflex character of the muscular spasm.

44. *Burman on Tetanus Treated by Calabar Bean.*—The case of a boy, aged 11, is related in the *Lancet*, Jan. 29, 1881. Tetanus followed a lacerated wound of the heel. Chloral and belladonna in full doses were first tried, but the patient became worse, and was presently unable to swallow his medicine, convulsive attacks being brought on by each attempt Subcutaneous injections of morphia also caused convulsions and did no good. Gelatine lamels, containing one-sixtieth of a grain of extract of Calabar bean in each, were next obtained. One was given every four hours, being slipped between the teeth and allowed gradually to dissolve in the mouth. Improvement was noted two days later. The lamels were continued for seven days, by which time the boy was convalescing satisfactorily. He has since completely recovered. The case was an extremely unfavourable one at the time when the administration of Calabar bean was commenced. The boy's age, and his ability to take plenty of nourishment throughout his illness, were of course greatly in his favour, but the result affords a fair presumption that the drug had a beneficial effect. It, therefore, deserves a further trial (in the form of gelatine lamels) in similar cases.

45. *Ramskill on the Treatment of Epilepsy.*—The case of a boy, aged 8 years, is related (*Lancet*, Feb. 26, 1881). He had been ill eight months, and had about ten fits every night. The plan of treatment adopted was (*a*) to seek for any peripheral source of irritation, especially in the abdomen or affecting the fifth nerve—none was found; and (*b*) to allay reflex excitability and the force of the cerebro-spinal centres. Bromide and iodide of potassium, with large doses of carbonate of ammonia, were given for about a fortnight without marked result. More ammonia was added, and the rate began to diminish. Three weeks later a teaspoonful of a mixture containing

equal parts of chloral, camphor, and vaseline was ordered to be rubbed into the scalp every night. The mixture previously mentioned was also continued, and a pill, consisting of equal parts of aloes, valerianate of zinc, and extract of conium, given every night. For more than five weeks there was no recurrence of fits; then there was one fit each night for three nights.

46 and 47. *Bomford and Lawrie on Nerve-Stretching in Anæsthetic Leprosy.*—This treatment of anæsthetic leprosy was first brought forward by Dr. Edward Lawrie (see *Indian Med. Gaz.*, Sept. and Oct. 1878). Successful cases are now recorded in the *Lancet*, Feb. 26, and March 12, 1881. That by Dr. Bomford is remarkable, in that the ulnar nerve broke across when traction was attempted. The ends were united by a thick catgut ligature, and the accident made no difference in the ultimate result. Eleven days after the operation, sensation was restored over the whole of the previously anæsthetic area, with the exception of the extreme tip of the little finger. A month later, the patient was reported to be working on the roads, and quite restored to health.

49. *Reinhard on the Action of Hyoscyamin in Insanity and Epilepsy.*—In his paper on this subject, read before the Berliner Gesellschaft für Psychiatrie und Nervenkrankheiten, Reinhard arrives at the following conclusions. In many cases of mania, hyoscyamin tends to produce quiet and to shorten the disease. It acts best in the periodical excitement which accompanies menstruation. In epilepsy, its action is sometimes so far favourable, that it diminishes the number and intensity of the fits. The good effects of the drug occur almost solely in cases with a small and 'contracted' pulse. It can never be given continuously for long periods, on account of the danger of causing cardiac paralysis, and its injurious effects on nutrition. It cannot, therefore, be said to be of great therapeutic value.

C. S. W. COBBOLD, M.D.

DISEASES OF THE THROAT.

RECENT PAPERS.

1. KOCH. — Laryngeal Paralysis in a Young Child. (*Ann. des Mal. de l'Oreille, du Larynx., etc.*, March 1881; *Revue Mens. de Laryng., etc.*, April 1881.)

2. DUCAU.—Isolated and Complete Paralysis of the Arytenoid Muscle. (*Revue Mens. de Laryng., d'Otol., etc.*, May 1881.)

3. COHEN.—A Case of Primary Tuberculosis of the Larynx. (*Arch. of Laryng.*, April 1, 1881.)

4. STRAUSS.—The Removal of Laryngeal Polypi by means of a Sponge. (*Inaug. Dissert.*, Breslau, 1879)

5. MOURE.—Cysts of the Larynx. (*Revue Mens. de Laryng., etc.*, February, March, and April, 1881.)

6. KOCH.—A Case of Cystic Goître. (*Ann. des Mal. de l'Oreille, du Larynx, etc.*, May 1881.)

7. SEILER. — A Case of Papillary Growth of the Larynx. (*Arch. of Laryng.*, May 1881.)

8. HEINZE.—A Rare Form of Stenosis of the Larynx. (*Monatss. für Ohren.*, April 1881; *Revue Mens. de Laryng., etc.*, May 1881.)

9. KIESSELBACH.—Case of Laryngeal and Pharyngeal Stenosis after Typhoid Fever. (*Centralblatt für Chir.*, 1880, No. 51.)

10. GANGHOFNER.—The Value of Catheterisation in Stenosis of the Larynx. (*Prager Med. Woch.*, 1880, 37, 39; *Ann. des Mal. de l'Oreille, du Larynx, etc.* May 1881.)

11. SAINT-PHILIPPE. — Neuralgic Angina. (*Journ. de Méd. de Bordeaux*, March 1881.)

12. HUCHARD.—Neuralgic Angina. (*Journ. de Med. et de Chir. Prat.*, April 1881.)

13. FRAENKEL.—Neurosis of Sensibility of the Pharynx and Fauces. (*Ann. des Mal. de l'Oreille, et du Larynx*, May 1881.)

14. GÜTERBOCK. — Foreign Bodies in the Trachea. (*Arch. für Klin. Chir.*, Band xxvi.)

15. ROE.—Fracture of the Larynx. (*Arch. of Laryng.*, April 1, 1881.)

16. INGALS. — A Case of Swallowing the Tongue. (*Ibid.*)

17. LANGE.—Nasal Polypi. (*Ann. des Mal. de l'Oreille, et du Larynx, etc.*, May 1881.)

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1. *Koch on Laryngeal Paralysis in a Young Child.*—A little child (*Annales des Maladies de l'Oreille, du Larynx, etc.*, March 1881; and *Revue Mensuelle de Laryngologie, etc.*, April 1881), very delicate, had suffered five months before with laryngeal catarrh. Although the cough had disappeared, there was hoarseness almost amounting to aphonia. Three weeks ago, inspiratory dyspnœa had come on, and necessitated tracheotomy. On laryngoscopic examination, the vocal cords were found reddened, and almost immovably fixed in the position of phonation. Although three weeks had elapsed since the operation, the cannula could not be removed without a recurrence of the dyspnœa. Dr. Koch diagnosed total laryngeal paralysis of a myopathic origin. He remarks how easy it is to confound this affection with those cases of true croup in which the symptoms come on rapidly. Physiological experience agrees with the clinical symptoms of this laryngeal paralysis. In young animals, if the two recurrent nerves be cut, death ensues from asphyxia; but, in adult animals, the dyspnœa is almost insignificant. In both cases, the vocal cords are almost paralysed, and occupy the same position as in the cadaver, *i.e.*, between the positions of phonation and inspiration, but the dimensions of the glottis are far from being the same. Paralysis due to compression of the recurrents is generally partial at the beginning, and almost always limited to the posterior crico-arytenoids; it progresses slowly, and, as the other muscles are implicated, the intense dyspnœa gradually disappears. Dr. Koch thinks that the complete œdematous infiltration of all the laryngeal muscles, and, in consequence, the complete paralysis of the organ, lead to aphonia and to mortal dyspnœa in children. The treatment should consist of astringent inhalations and rest, electricity being powerless in these cases.

2. *Ducau on Isolated and Complete Paralysis of the Arytenoid Muscle.*—Dr. Ducau (*Revue Mens. de Laryngol., d'Otol.*, etc., May 1881) says that paralysis occurring in the arytenoid muscle alone, and not affecting other laryngeal muscles at the same time, is very rare. He has only been able to find four such cases recorded, and in one of these the paralysis was only partial. He adds a fifth case, previously unpublished, which came under his own personal observation. The objective symptom of the affection is the same in all these cases, *i. e.*, the remaining open of the interarytenoid glottis during efforts at phonation, while the interligamentous glottis closes as usual. Loss of voice is the only functional trouble. There is no pain nor sensation of discomfort in the throat. A woman, aged 35, had been subject for several years to sore throat. A month since, hoarseness came on, followed by aphonia. When

the patient made an effort to phonate, the vocal cords did not approach in their posterior third, although they were in exact juxtaposition in the two anterior thirds. The rest of the organ was normal. Electricity applied externally was without success, but, when it was applied directly to the larynx, the voice returned, though still hoarse, and a second application was sufficient to restore its normal sound. The cords were then found to approach throughout their whole course. Dr. Ducau thinks there is no fear of confounding any of these cases with tumours or other affections of the arytenoid region. If a tumour be present in that region, it is true that the intercartilaginous glottis will not close, but a slight interval will also remain between the vocal cords in the rest of their length. Dr. Ducau thinks it a fact worthy of note that all the patients were females; and, considering how common laryngeal paralysis of a nervous origin is in women, he is of opinion that hysteria plays the chief part in the production of this affection.

3. *Cohen on a Case of Primary Tuberculosis of the Larynx.* — The patient (*Archives of Laryngology*, April 1, 1881), who had for several years been much exposed to cold, had suffered from sore throat for four months. His great complaint was of intense pain in deglutition. The laryngoscope revealed a much thickened epiglottis, very pallid in aspect, with a well developed omega-like depression. An irregular racemose ulcer was visible on the left edge of the epiglottis, and a second occupied the left glosso-epiglottic ligament, and extended to the base of the tongue. The supra-arytenoid eminences were enlarged, and covered with pale pultaceous deposits. The ventricular bands were deeply congested and tumefied. Tuberculosis was diagnosed, although there was no evidence of pulmonary lesion. Solid food could not be swallowed at all. Insufflations of morphia were the only means of relief. The disease progressed steadily; ulceration began at the right side and at the central portion of the epiglottis, forming eventually a serpiginous ulcer encircling the epiglottis. The intra-arytenoid structures underwent marked wrinkling, and a slimy serpiginous ulcer began to mount the right palato-glossal fold. At this stage, the lungs showed signs of being affected; and, after the manifestation of tuberculosis in the lungs, the laryngeal lesions progressed but slightly. The patient was not relieved, and died in two months. At the *post mortem* examination, tuberculous deposits and small cavities were found in the left lung. A few caseous glands were observed in the cervical region at the left side. The ulceration of the glosso-epiglottic sinuses was extensive, and had continued into the base of the tongue, with a partial loss of substance on the right side. The tonsils, vocal cords, and the whole of the subglottic mucous membrane of the larynx were intact. The microscope revealed the submucous connective tissue largely infiltrated with a small-celled product, which showed in places a tendency to the formation of depôts with cheesy centres. There was no history of predisposition to tubercular disease, and the exciting cause was probably exposure to intense cold.

4. *Strauss on the Removal of Laryngeal Polypi by means of a Sponge.*—Dr. Strauss (*Inaug. Dissert.*, Breslau, 1879) strongly advocates Voltolini's method of removing laryngeal polypi by means of a sponge, which has hitherto received little favour from the profession. He describes the proceeding as follows. A dry or wet sponge, of the size of a cherry-stone or hazel-nut, well fastened to a metal handle, is introduced into the larynx while the patient intones *a*. Here it is held, the laryngeal muscles contracting around it spasmodically until the patient draws a breath, when it is quickly passed between the vocal cords. This proceeding is repeated several times in one sitting. All polypi growing in the larynx, as far as the upper part of the trachea, can be reached by this method. They are broken off or contused, and afterwards mortify. This is especially the case with the smallest and most firmly attached ones, which have hitherto been the most difficult to remove. No ill effects have resulted from bleeding or from the detached portions falling into the trachea. Voltolini represents this operation as simple, and without danger. He has performed it fifteen times; in seven cases the polypi were removed at one sitting; in three cases in two or three sittings. In four cases, a longer time was required to remove them. The polypi were partly pedunculated, partly broad based. In structure they were fibromatous, papillomatous, and myxomatous. In two cases they were situated below the cords.

5. *Moure on Cysts of the Larynx.*—Dr. Moure sums up his experience of cysts of the larynx (*Revue Men. de Laryn., etc.*, Feb., March, and April, 1881) as follows. 1. Cysts of the larynx, whether extra- or intralaryngeal, are rare. 2. Their favourite seats, in order of frequency, are the inferior vocal cords, the lingual or laryngeal aspect of the epiglottis, the ventricles of Morgagni, the ary-epiglottidean folds, and the arytenoid cartilages. 3. The same symptoms are present with cysts as with other tumours of the larynx; but the alternating periods of hoarseness and clearness of voice are here very rare. Alteration of voice, a constant symptom when the tumour is on one of the vocal cords, is not a safe indication of the age of the cyst; for, if the cyst be situated in the interior of one of the ventricles of Morgagni, the vocal troubles may not appear until the time when the tumour reaches the level of the inferior vocal cords. 4. Laryngoscopic examination is the only means of diagnosing the existence of an intralaryngeal cyst, and discovering its situation, size, form, and aspect. The sound will indicate its consistency, and should always be used to determine if fluctuation be present. In tumours of the epiglottis, digital examination and the forcible lowering of the tongue must not be neglected, but they may not suffice, and the laryngoscope should be used to further the examination. 5. Cysts of the larynx are solitary, sessile, and globular in shape; they vary in size from a gooseberry-seed to a cherry-stone. Their surface is smooth, even, more or less transparent, of a yellowish white or opaline colour when on the vocal cords. A more or less delicate vascular network often traverses their surface when they have attained a certain size. 6. In anatomical structure, they do not differ from other mucous cysts. 7. They are due to the dilatation of mucous glands, whose excretory passages have become obliterated from some cause difficult to determine. 8. Cysts of the larynx, if left to themselves, gradually increase in size, but they generally take several years to attain dimensions sufficient to cause symptoms (those developed on one of the vocal cords excepted). 9. They may break suddenly during vomiting, crying, coughing, etc., and their contents may be evacuated. The tumour will then disappear of itself and leave no trace. 10. The best treatment for intralaryngeal cysts is crushing them with the laryngeal forceps, which is a more easy operation than excising them with a polypus-knife,

the latter method requiring great toleration on the part of the patient, or anæsthesia of the larynx. For cysts of the epiglottis, the best plan is to excise a portion of their wall. 11. Cysts of the larynx very rarely return. Dr. Moure can only find the record of one such case, and that following the simple puncture of the tumour. (See also LONDON MEDICAL RECORD, June 1880.)

6. *Koch on a Case of Cystic Goître.*—Dr. Paul Koch, at the Society of Medical Sciences at Luxembourg (*Annales des Maladies du Larynx, etc.*, May 1881), shewed an interesting specimen of cystic goître which had developed very slowly from infancy in a woman, a native of a country where goître is not often seen. The tumour, though slightly affecting speech, had not caused dyspnœa nor any suffocative attacks, nor was there any difficulty in swallowing until towards the close of her life, the patient dying of inanition at the age of 71. The tumour was an unilocular cyst situated on the left lobe of the thyroid body, with very thick walls, and filled with a reddish grumous thick material. It was not prolonged to the sternum. The trachea was displaced towards the right side; the common carotid artery and internal jugular vein and pneumogastric nerve, of the same side, had followed the same displacement. The calibre of the trachea was reduced to less than two-thirds of its normal size, without producing dyspnœa. The cartilaginous rings of the trachea were still intact. The right recurrent nerve had followed the displacement of the trachea and œsophagus; the left recurrent was adherent to the posterior wall of the tumour, without appearing altered. Dr. Koch observes that, from a consideration of this case, we see that a huge goître with the maximum of displacement of the trachea and œsophagus may exist without causing imminent danger; while small ones, even if they are not pulsating, may compromise life if the compensating deviation of the trachea has become impossible through partial adhesions of a prior date, or inflammations of a later date, or through the ossification of the thyrohyoid and stylo-hyoid ligaments; as, in these circumstances, the calibre of the trachea is encroached upon, with a fatal result if tracheotomy be not performed in time. In the present case these conditions were not present, and dysphagia during the close of life was the only symptom of any consequence.

7. *Seiler on a Case of Papillary Growth of the Larynx.*—The patient (*Archives of Laryng.*, May 1881), aged 64, had suffered from sore-throat for a year and a half, and had been treated for chronic laryngitis. A swelling began to show itself in the neck over the thyroid cartilage, which was very painful; there were some dyspnœa, aphonia, and slight cough. A papillary growth was detected lying upon the left vocal cord, apparently springing from the left ventricle. The left ventricular band, ary-epiglottic fold, and arytenoid cartilage, were greatly swollen; those on the right were also swollen, but to a less extent. The epiglottis was swollen and red, and a small white protuberance of the size of a millet-seed was seen at the anterior angle of the glottis, springing from the base of the epiglottis. It was decided to remove the tumour through the mouth. The growth could not be grasped with Mackenzie's cutting forceps, on account of the irritability of the parts; but Dr. Seiler succeeded in removing a good-sized piece with Stoerk's guillotine. This caused great pain in the left ear, and did not lessen the dyspnœa and aphonia. The white protuberance at the base of the epiglottis was rapidly growing larger, and was pushing backward in the space between the left vocal cord and the ventricular band. Several leeches having been applied to the neck, one of the bites several days afterwards began to discharge pus; and the opening, being probed, was found to be a sinus 1½ inches in length. From this, Dr. Seiler thought the rapidly growing white tumour was nothing but the mucous membrane loosened and distended with pus. The dyspnœa increased so alarmingly that tracheotomy was performed, with great relief to the patient. The tumour in the larynx, however, steadily increased, although portions of it were frequently removed, as did also the abscess in the neck. An incision into the latter was made in the median line, but, on introducing the finger after the knife had been removed, it went directly into the larynx, the vocal cords being distinctly felt. On withdrawal of the finger, a papillomatous growth of the size of a large almond showed itself in the opening, and was removed. The dysphagia and aphonia were not, however, relieved. The externa wound was kept open, and a few days after the operation it was found that all the soft tissues of the neck in front of the larynx, as well as in the interior of the larynx, were infiltrated with the growth. Deglutition became more and more difficult, the patient being unable to swallow anything but small quantities of liquids. A laryngoscopic examination showed the larynx completely filled with a large mass of tumour, which interfered with the movements of the tongue and epiglottis. Thyrotomy was performed, and a large mass weighing 2½ ounces was removed, chiefly by scraping with a sharp uterine curette, from the interior of the larynx, and from the soft parts of the neck overlying the larynx. On the third day after the operation, the patient was able to swallow solids, and gained rapidly in strength. The larynx was clear of the growth, but the trachea above the tracheal tube was still filled up. Portions of the growth were daily removed through the external wound, which remained partially open, without, however establishing a communication between the larynx and trachea. A third operation was performed. This consisted in splitting the cricoid cartilage and first ring of the trachea, and then removing the growth with the curette and finger-nail. Two days afterwards, the patient could force air through his larynx and speak in a hoarse voice. The favourable condition lasted only a short time. The larynx and trachea soon began to fill up, the tumour growing too fast to be removed either by instruments or by caustics. The patient sank gradually from inanition, and died five months later. A *post mortem* examination could not be obtained. The absence of many of the clinical features of epithelioma of the larynx, and especially the want of ulceration, led Dr. Seiler to believe that the growth was a papilloma. The case is of interest, in illustrating the great tolerance of even an enfeebled system to surgical interference of such a grave character as tracheotomy, thyrotomy, and laryngotomy.

8. *Heinze on a Rare Form of Stenosis of the Larynx* (*Pharynx?* Rep.)—A woman, aged 51 (*Monatschr. für Ohrenheilk.*, April 1881; and *Revue Mensuelle de Laryngol., etc.*, May 1881), the mother of ten healthy children, had a syphilitic affection when eighteen years old, which, under treatment, disappeared in a fortnight. Since then she had no other treatment till February 1879, when she began to have trouble in breathing and swallowing. On examination, the cervical glands were found en-

larged, the left pillar of the fauces was twice as large as the opposite one, and the right pillar was covered with cicatrices, which had drawn it towards the middle line. Tonsils no longer existed. Cicatrices had also involved the pharynx, narrowing its lumen, so that only an opening was left, scarcely big enough to admit the little finger. This opening was common both to the larynx and to the œsophagus. [This case is apparently very similar to one published by Dr. Gilbart Smith and Mr. Walsham in the *Trans. of the Royal Med. and Chirur. Soc.*, vol. lxiii, 1880. In that communication, reference to the few other cases of this form of stenosis of the pharynx is given. Since that time, another similar case has been published by Billroth (see LONDON MEDICAL RECORD, April 1880).—*Rep.*]

9. *Kieselbach on a Case of Laryngeal and Tracheal Stenosis after Typhoid Fever.*—To the three well-known conditions of the larynx and trachea which may render dangerous the removal of the cannula after tracheotomy, viz., paralysis of the glottis, growth of granulations, and cicatricial contractions, Dr. Kieselbach (*Centralb. für Chirur.*, No. 51, 1880) adds a fourth, namely, a simple arching forward of the mucous membrane of the trachea. The case was that of a girl, in whom four weeks previously tracheotomy had been performed. The tube could not be dispensed with. On examination, growths of granulations were seen; but besides these, there was an arching forward of the mucous membrane, beginning below the vocal cords, and extending downwards to the spot where the cannula touched the hinder wall of the trachea. The dyspnœa caused by this condition was at length overcome by a specially constructed cannula, and the patient was cured in nine months. The cannula was provided with a movable flap attached to the convexity of its curve, so that by means of a suitable screw, the flap, after the introduction of the cannula, could be made to exert pressure on the projecting mucous membrane. A similar condition of the larynx and trachea has been described by Dupuis and Schottelius.

10. *Ganghofner on the Value of Catheterisation in Stenosis of the Larynx.*—The author (*Prager Med. Woch.*, 1880, 37-39; *Annales des Maladies du Larynx, etc.*, May 1881) analyses five cases of stenosis of the larynx that occurred in his own practice, and adds several cases of others, showing the advantage of catheterising under various circumstances. The facts show that mechanical dilatation is especially successful in laryngeal stenosis, provided that the acute stage be passed. The greatest success has been obtained in the hypertrophic form of chronic laryngitis with vegetations in the lower part of the larynx, to which has been given the name of chorditis vocalis inferior hypertropoica. It is of the greatest importance to know what are the indications for laryngeal catheterisation in acute œdema of the glottis. Some cases of Hack, Macewen, Labus, and one of the author's, seem favourable to the operation; and Weinlechner has even recommended it in suffocative attacks of croup in place of performing tracheotomy. But Hüttenbrenner disagrees with this; first, because it is difficult to manage in children; and second, because of the danger of pushing back the false membranes into the trachea, and so making a fresh obstacle to the entrance of air. Ganghofner advocates catheterisation in asphyxia in new-born children, and in asphyxia in adults during the administration of chloroform, as pulmonary insufflation may be readily accomplished by its means.

11. *Saint-Philippe on Neuralgic Angina.*—Dr. Rousseau Saint-Philippe (*Journ. de Méd. de Bordeaux*, March 1881) describes an affection of the throat, characterised by a severe lancinating pain with throbbing like that of an abscess, while there is nothing to be seen except a little redness, and very slight, if any, swelling. There is no ulceration nor glandular enlargement. The pain is only slight in the morning, but comes on with severity in the middle of the day, and becomes intolerable at night. The pain persists in spite of gargles. The author believes that this angina, like orbital neuralgia, may occur after a diffuse catarrhal inflammation. The neuralgic nature of the angina is shown by the treatment; two days being sufficient to mitigate, if not to completely relieve, the pain. He prescribes 40 or 50 centigrammes of sulphate of quinine, to be taken two hours before the crisis in the middle of the day, and sustains the action of this first dose by a smaller quantity, 20 or 25 centigrammes given in the afternoon.

12. *Huchard on Neuralgic Angina.*—Since the communication of Dr. Saint-Philippe (see above), Dr. Huchard has published (*Journ. de Méd. et de Chirurg. Prat.*, April 1881) some further account of this affection. His conclusions are as follows. 1. There is great disproportion between the intensity of the pain and the slightness of the hyperæmia and swelling. 2. The hyperæmia is subordinate to the neuralgia, the latter preceding and perhaps following the former. 3. The pain has special characters. 4. Treatment by gargles is insufficient; and the best effects follow antineuralgic treatment, viz., sulphate of quinine, and paintings with glycerine and morphia.

13. *Fraenkel on Neurosis of Sensibility of the Pharynx and Fauces.*—During the past eighteen months, Dr. Fraenkel (*Ann. des Mal. de l'Oreille, du Larynx, etc.*, May 1881) has met with ten cases of neurosis of the isthmus of the fauces and pharynx. Six of the patients were women, and of these the greater number were the subjects of uterine affections. Among the four male patients, one was a child aged 13. The principal symptom was hyperæsthesia of the fauces, characterised by a sensation of burning on the fauces which radiated over the palate and tongue—a continuous sensation in one case, intermittent in another. In some, the 'timbre' of the voice was altered, producing a resemblance to that of an animal. The author recommends electricity as a remedy. Of the ten patients, five were cured, and five were improved by this means.

14. *Güterbock on Foreign Bodies in the Trachea.*—Dr. Güterbock thinks that the following cases, which he communicates to the *Archiv für Klin. Chir.*, Band xxvi, show that if tracheotomy have been performed, the spontaneous expulsion of a foreign body in the trachea may be hoped for after the symptoms of inflammation and irritation, which its presence has set up, have had time to abate. 1. A girl, five years old, swallowed a piece of bone, and afterwards suffered from a continually increasing dyspnœa. Tracheotomy below the isthmus was performed, and was followed by alleviation of the dyspnœa. The next day there was some bronchitis, which increased in severity. Four days after the operation, attempts were made to remove the cannula, but without success, the dyspnœa being as urgent as before the operation. Six days after the operation, the patient coughed up through the mouth the piece of bone; but the cannula could not be dispensed with until ten days afterwards. The piece of

bone was smooth, roundish, with dentated but not very sharp edges and flat surfaces, and not quite so large as a shilling. The dyspnœa was evidently not caused by the direct closure of the glottis by the piece of bone, but rather by the swelling and inflammation which the bone had occasioned, as was shown by the persistence of the symptoms after it had been coughed up. Dr. Güterbock thinks that the bone must have become lodged in a fold of mucous membrane, as it could not be felt by the finger. 2. A girl, two years old, swallowed a piece of a herring's tail, perhaps only a single bone. Hoarseness gradually came on, with attacks of dyspnœa. On admission, two days afterwards, there was stridor, with recession of the epigastrium. The pharynx was red and swollen, but fluids and solids could be readily swallowed. Inferior tracheotomy was performed with immediate relief. A severe inflammation of the greater bronchi, which followed, prevented search from being made for the bone. Eight days after the operation an elastic catheter was introduced through the wound, and passed through the glottis into the mouth, without, however, finding the bone. This search was repeated three or four times. The great irritability of the mucous membrane prevented laryngoscopic investigation, or much endolaryngeal manipulation. Twenty-five days after the operation, the cannula was removed; but the patient remained aphonic, and there was some bronchitis. Four days later, a bone, one-third of an inch long, was expelled through the mouth during a violent fit of coughing. The aphonia and irritative cough then completely ceased. In this case, also, the dyspnœa was not caused directly by the foreign body, but by the inflammation and irritation dependent upon it.

15. *Roe on a case of Fracture of the Larynx.*—This case is reported in the *Archives of Laryng.*, vol. ii, May 1881. The patient, when first seen, was suffering from great dyspnœa, expectorating and occasionally vomiting blood. There was a bruise over the region of the larynx, and, on laryngoscopic examination, a large swelling, evidently from extravasated blood, was found in the right ary-epiglottic fold; there was also fracture of the thyroid cartilage. The patient died before tracheotomy could be performed. At the *post mortem* examination, the right ala of the thyroid cartilage was found fractured. The central point was about half an inch from the median line extending inward to the suprathyroid notch, and downward to the cricoid cartilage. In the centre, where the force of the impinging body was greatest, a piece of the cartilage was removed or punctured out. In the ary-epiglottic fold was found the swelling from the extravasated blood seen with the laryngoscope; and in the lower border of this swelling, there was a rupture of the mucous membrane, which gave rise to the hæmorrhage. The question of interest in this case is in regard to the manner in which the fracture was produced. The man, it was said, had stated before his death that he fell against the rounded corner of a square table; but there was some suspicion that he had been strangled by an assailant. Dr. Roe considers this latter as not impossible, and quotes two cases to show that it may sometimes occur. 'Or the fracture might have been produced by a blow from a bottle, etc., in the same way that a round or blunt instrument will produce fracture of the skull or other bones with but little or no injury to the soft parts. If not from the hand of an assailant, but from a bottle, the corner of a table, or some blunt instrument, the *modus operandi* was the same. The force coming against the anterior portion of the thyroid cartilage, the vertebral column, acting as the point of resistance, increases the force of the impinging body against the cartilage, and favours fracture of the latter.'

16. *Ingals on a Case of Swallowing the Tongue.*—For nine years the patient (*Arch. of Laryng.*, vol. ii, No. 2, May 1881) had suffered from dyspepsia and symptoms of spinal irritation, culminating on occasions in hysterical convulsions, which were ushered in by loss of power in the tongue and aphasia of a few minutes' duration. Two days after one of these convulsive attacks which Dr. Ingals was called upon to treat, there was a sudden eructation of gas and fluid from the stomach of the patient, instantly followed by suffocation, which lasted some time, and nearly proved fatal. Three days later, a similar, though less severe, attack occurred; and, in the evening of the same day, a slighter attack followed. The patient complained of a sense of extreme thickness of the tongue at its base, and inability to control its movements; these sensations were usually present some time before the suffocative attack. During the attack the whole throat seemed filled, and breathing was instantly and completely checked. The patient stated that the tongue seemed much farther back in the mouth than it was possible to get it voluntarily, and that the tip was pressed against the palate, and seemed curled over on the surface of the tongue. After various frantic efforts the tongue would resume its natural position in the mouth, and respiration would again go on without impediment. Dr. Ingals directed the friends of the patient, in case of another attack, to seize the tongue with a pair of forceps, and draw it forward, unless the patient, by passing her finger over it, could accomplish the same result. The day following the third attack another occurred, which was at once relieved by the patient passing her finger over the tongue and drawing it forward. This was the last of these attacks; the patient gradually improved in all her symptoms, and is now in a fair way of recovery. Since witnessing this case, Dr. Ingals has heard of another occurring in the same city, in which the life of a man, who 'swallowed his tongue', was saved by the by-standers, who promptly drew out the organ.

17. *Lange on Nasal Polypi.*—Dr. Lange (*Annales des Maladies de l'Oreille, du Larynx, etc.*, May 1881) says that nasal polypi are generally easy to recognise, but sometimes a tumefaction of the mucous membrane (which especially occurs at the anterior or posterior extremity of the inferior spongy bone) may be mistaken for them. Of the numerous bivalve speculums, Dr. Lange gives the preference to Duplay's, but he prefers to use an univalve dilator he has had made for himself. The dilators which he employs, both for exploring and for operating, are the hard India-rubber ones of Sigmund. The author discards the old method of removing polypi by means of polypus-forceps, and cuts each separately with the wire of the écraseur. The operator should aim at removing as many polypi as possible in the shortest time, before the blood and mucus accumulates. To do this, he should apply several écraseurs at the same time. When there are many polypi, a third, or even half of them, may be removed at one sitting. The author alleges that this method is simple, and ensures no return of the polypi.

W. J. WALSHAM.

OPHTHALMOLOGY.

RECENT PAPERS.

1. UHTHOFF.—On Pathological Changes in the Retina Associated with Progressive Pernicious Anæmia. (*Klin. Monats. für Augen.*, Dec. 1880.)

2. EMMERT.—On a new Ophthalmo-Phantom. (*Ibid.*, Oct., 1880.)

3. KUBLI.—On a Case of Total Blindness from Glaucoma Simplex, in which Vision was restored. (*Ibid.*)

4. DEHENNE.—On Cases of Blepharospasm cured by application of Metals to the Forehead.

5. WEBSTER.—On Sympathetic Inflammation following Operations for Cataract. (*Trans. of the Amer. Ophthal. Soc.*, 1880.)

6. KIPP.—On Keratitis from Malarial Fever. (*Ibid.*)

7. SEELY.—On the Action of Homatropin Hydrobromate. (*Cincinnati Lancet and Clinic*, Nov. 20, 1880.)

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1. *Uhthoff on Pathological Changes in the Retina associated with Progressive Pernicious Anæmia.*—The writer describes (*Klin. Monats. für Augen.*, Dec. 1880) the changes revealed by the microscope in the retinæ of six eyes removed after death from four cases of fatal pernicious anæmia. They were, 1, hæmorrhages, limited chiefly to the nerve-fibre and intergranular layers, and situated for the most part near the posterior pole, especially around the disc; 2, varicose hypertrophy of the nerve-fibres, affecting chiefly those of the most internal layers, so as to cause them to intrude upon the vitreous body, and consisting chiefly of the often-described shining, or finely granular masses of spherical, or spindle-shaped or retort-like form; 3, homogeneous colloid, or finely granular masses in the intergranular layer, present in one case only. It seems from these observations that progressive pernicious anæmia must be added to the list of morbid conditions which give rise to a peculiar varicose hypertrophy of nerve-fibres.

2. *Emmert on a new Ophthalmo-Phantom.*—This model, designed by Dr. Emmert, and described and figured in the *Klin. Monats. für Augen.*, Oct. 1880, is in certain respects new. It demonstrates the positions and actions of all the external ocular muscles; the results of suspended action of one or more of these; the varying forms of the emmetropic, the hypermetropic, and the myopic eye; the course of light-rays in each of these conditions; and the projection of retinal images. The linear dimensions of the model globes are four times greater than the natural size. The cost of the apparatus and the name of the maker are not stated.

3. *Kubli on a Case of Total Blindness from Glaucoma Simplex, in which Vision was restored.*—The patient, a man, aged 21, stated (*Klin. Monats. für Augen.*, Oct. 1880) that his sight had been steadily failing for twelve months, with occasional appearance of a coloured ring around the light, and that two months ago he had suddenly become totally blind. No other symptoms were complained of. On admission, both eyes presented T + 2, glaucomatous cupping of the discs, total absence of perception of light, oval dilatation of the pupils. The pupils gave no reaction to light, but contracted with movements of convergence, and were contracted strongly by eserine. Iridectomy upwards was performed on each eye. Perception of light returned the following day. Vision ultimately reached 3-100; whether in both eyes, or in one only, is not stated. [The strong contraction of the pupils by eserine is worthy of note in connection with the exceptionally good result. There is reason to believe that such contraction in a glaucomatous eye indicates that the angle of the anterior chamber, though compressed, has not reached the stage of solid adhesion. —*Rep.*]

4. *Dehenne on Cases of Blepharospasm cured by Application of Metals to the Forehead.*—M. Dehenne relates the foregoing case. A girl aged 13, who had not menstruated, suffered during two months with frequent spasm of the orbicularis; ultimately the spasm became tonic. There was no visible disease of the eyes or of the eyelids. Other treatment having failed, she was made to wear around the head a linen band, into which three or four small metal plates (zinc or copper) as large as a ten-centime piece, were fastened so as to be in contact with the forehead. Improvement was visible after the band had been worn one night; a week later, the spasm was completely cured. A similar result was obtained in the case of a lady 40 years of age; the band being laid aside before cure was complete, the spasm returned in full force, but was permanently cured by its further use.

5. *Webster on Sympathetic Inflammation following Operations for Cataract.*—The possibility of this sequence is an argument against operating upon one eye while the fellow eye still has useful vision. Dr. Webster gives details of eleven case, three of which had come under his own care (*Transactions of the American Ophthalmological Society*, 1880). In four of these cases, both eyes were lost; in one, the operated eye was lost, and the other badly damaged; in one, the operated eye was lost, and the other recovered in good condition; in one, the operated eye recovered, with drawn-up pupil and perception of light, and the other recovered with only slight damage; in one, the operated eye recovered good sight, and the other was operated on with promise of benefit; in two, both eyes recovered in good condition; in one, the operated eye recovered good vision, while the other eye had to be excised. The frequency of sympathetic inflammation after extraction of cataract is not known. Dr. C. R. Agnew is of opinion that, of the eyes which are totally lost after this operation, from two to three per cent. excite sympathetic inflammation. A case is related to show that conjunctivitis may depend upon sympathetic influence. A conjunctivitis, which had been treated with astringents for two months without benefit, rapidly subsided after the excision of the sensitive and shrunken fellow eye.

6. *Kipp on Keratitis from Malarial Fever.*—The author has witnessed this connection many times (*Trans. of the American Ophthalmological Society*, 1880). In some patients, every fresh attack of intermittent fever was followed by the corneal affection. One eye only was generally affected. The conditions were severe pain in and around the eye, with circum-corneal injection, photophobia, and lacrymation; one or two or more slightly raised, irregular, opaque lines of varying length on the surface of the cornea leading to ulceration of greater or less extent. Hypopion was rare, even in the severest cases; spontaneous perforation did not occur in any. There was no diminution of tension, and no lowering of corneal sensibility. The process of repair was extremely slow, generally from two to four months. Of local remedies, the pressure bandage, warm fomentations, and sulphate of atropia, gave the greatest relief. Quinine and iron were given internally, and, latterly, arsenic in medium doses was employed with much benefit in some cases. The occurrence of keratitis in connection

with intermittent fever has been rarely mentioned by authors.

7. *Seely on the Action of Homatropin and Hydrobromate.*—Dr. Seely says (*Cincinnati Lancet and Clinic*, Nov. 20, 1880) that, when paralysis of the ciliary muscle is desired with a view to testing the refraction of the eye, this drug has great advantages over atropine. One instillation of a four-grain solution produces complete paralysis of the accommodation in the course of an hour or two, which disappears completely in twenty-four hours. It has appeared to produce neither constitutional disturbance, nor conjunctival irritation. PRIESTLEY SMITH.

8. *Fœsche on the Operation for Trichiasis.*—This author recommends (*Klin. Monats. für Augen.*, xix Jahrg., January) the following modification of Arlt's operation for trichiasis. In the first act, the upper lid is split into an anterior and a posterior part, as in Arlt's operation. In the second act, the anterior part is pushed up on the posterior about 1-12th to 1-10th of an inch, and fixed with three sutures on the tarsal cartilage. The middle of the three sutures is applied transversely, and includes about 1-8th of an inch, the other two sutures are vertical. The raw surface thus left, in place of being allowed to heal by granulation, as in Arlt's method, is covered with a thin strip of epidermis taken from the upper arm with a razor. With proper care, this transplanted strip heals in its place in twenty-four hours. Immediately on the eye the author lays a protective disinfected with salicylic and boracic acid, then a fold of lint similarly disinfected, over this salicylic cotton-wool, and, over all, carbolised gauze. The first dressing may remain on for forty-eight hours. The author has used this method in twelve cases, and is thoroughly satisfied with it. JAMES ANDERSON, M.D.

THE CONGRESS OF GERMAN SURGEONS.

I.—PAPERS READ (*continued from p.* 216).

Resection of the Tarsus with an Anterior Transverse Incision.—Dr. Hüter (Greifswald) said that, in several cases of so-called tuberculous disease of the tarsus, he had followed the old plan of making a transverse cut from one ankle to the other with the best result. He had done this, principally with the object of gaining as free a view as possible of the recesses of the joint: for the success of the operation depended on the entire removal of the diseased parts. If the results of resection had not hitherto been so good in disease of the ankle as in disease of the knee, the cause had lain in the difficulty, where a lateral incision had been made, of obtaining the desired access to the interior of the joint. After dividing the skin, Dr. Hüter first tied the arteries. Before cutting through the tendons and nerves, he applied catgut sutures to them; he then opened the joint, and removed the whole of the diseased parts. The nerves and tendons were then united by threads. In his opinion, tuberculosis was hereditary only in this sense; that it established in man a predisposition, under the influence of which inflammation assumed a specific character. Very often, in the subjects of tuberculosis, a general disturbance could be observed before any local process showed itself. In favourable circumstances, the local process might be rapidly developed, and give rise in its turn to general infection. This mischievous effect of the local focus of disease on the organism was removed by resection, except, perhaps, when fistulæ remained. These had their origin partly in an imperfectly performed operation, partly in the continued dyscrasia of the fluids of the body. He pointed out the favourable influence of the thermo-cautery in the healing of such fistulous openings. Even after the apparently perfect healing of local tuberculous affections, the subjects could not be declared entirely healthy, for not unfrequently the disease returned after many years. As he assumed inoculability to be the only criterion of the tuberculous nature of a pathological product, he could not recognise as tuberculous other processes which presented the anatomical appearance of tubercle, as in scrofula and syphilis.

Early Resection in Tuberculous Disease of the Joints.—Dr. König (Göttingen) ascribed only a limited value to early resection in tuberculous disease of joints. In a case of white swelling of the knee, with fistulæ and abscesses, he had obtained a cure by expectant treatment; and, in a case of coxitis, with large abscesses reaching to the middle of the femur, he had laid the parts freely open, and scraped the bone, without any disturbance of motor power. He had also acted in the same way, producing only slight impairment of motion, in a case of contraction of the adductor muscles, with slight shortening of the limb. It was only when the patient's general condition was seriously implicated by the local disease, or when there was danger of the occurrence of this, that resection should be done without delay. In a large number of cases, resection might be done to a very limited extent, especially when the neighbouring joint was not implicated in the disease of the bone. Up to 1879 he had successfully treated in this way five cases of this kind, but afterwards he had twenty-one cases. Of these, the elbow-joint was affected in eleven cases; the hip in four; the tarsus in six; and the knee in five. Ten recovered with useful limbs; in twelve, small fistulæ still remained; one died of erysipelas; and the result in one case was not known. Such diseases of bone usually revealed themselves by abscesses affecting the epiphysis, and by little pits on the surface of the bone, which denoted the commencement of fistulous tracks. An accidental opening of the joint in operating was harmless, under antiseptic protection. Cases might occur, though rarely, in which the morbid deposit in the bone could only be reached through the joint.

In the discussion which followed the reading of these papers, Dr. Sonnenberg said that it was impossible to confound tuberculosis with syphilis: in the latter, the giant-cells and miliary nodules were not produced. He denied that local tuberculosis was the effect of a dyscrasia.—Dr. Klebs admitted that, in many cases, tuberculous formations were limited to one spot; but they occasionally produced general infection. It was, however, not every local formation that was designated tubercle that really was so: *e.g.*, syphilis. Tuberculosis of joints was little disposed to metastasis, as caseous deposits were not so easily formed here as in spondylitis. Cheesy products afforded the best material for infection. That tubercle was a transmissible disease, Dr. Klebs believed to be proved not only by experiments on animals, but also by the occurrence of tuberculosis in children after the use of the milk of phthisical cows. As in the inoculation of animals, a stage of incubation was observed in man also; in children, tuberculosis in any form was not met with before the sixth week.—Dr. Hüter attached a higher value

than Dr. König did to the functional results of resection. Evacuation of the morbid deposit in the bone he regarded as being in general insufficient, as not unfrequently there might be several scattered foci.—Dr. Schede doubted the infective power of membranes of joints affected with tuberculosis. He had introduced pieces of such tissue into the abdominal cavity of rabbits in between twenty and thirty cases, and had not been able to observe any result of the inoculation.—Dr. Rosenbach, on the contrary, had obtained positive results from the same experiment. The negative observations might perhaps be explained by the disappearance of the tubercular outbreak after some time.—After a few remarks from Dr. Kraske and Dr. Thiersch, the discussion closed.

Extirpation of a Tumour from a Man affected with Hæmorrhagic Diathesis.—Dr. Thiersch (Leipsic) related the case of a hæmophilic subject, aged 37, on whom he ventured to perform the operation in the expectation that, under antiseptic dressing, the wound would rapidly become united. This, however, did not take place until the twenty-eighth day, the patient, in the meantime, having several times been in danger. A kind of Hippocrates' mitre having been applied, by means of a moist gauze bandage, with a starched bandage over it at the lower edge of the frontal turn, the operation was performed while hæmorrhage was going on. In spite of the additional application of an elastic bandage over the dressing, this had to be loosened at the end of two hours, in consequence of intolerable pain, and suffusion of the forehead with blood as far as the eyebrows. The cavity of the wound was filled with coagulum; the sutures having been taken out, this was removed, and a new dressing applied. During the night, the sugillation extended over the neck, and for a handbreadth over the chest. At each daily change of the dressing, a fresh clot had to be removed, and, on the ninth day, there was arterial hæmorrhage. Solution of perchloride of iron was used as a styptic, and a bandage was firmly applied. From the eighteenth to the twenty-third day, the progress of the case was complicated with erysipelas spreading from the nose; it did not, however, affect the wound. This was followed by the formation of hæmorrhagic vesicles. At last, cicatrisation took place slowly, a thin transparent cuticle being formed. There was no suppuration, only a bloody secretion.

Treatment of Phagedænic Ulcer.—Dr. Thiersch said that he yearly saw in Leipsic two or three cases of chancrous sore assuming a phagedænic character, sometimes extending along the back as high as the scapulæ. All the ordinary remedies were, as a rule, without effect, until spontaneous healing took place, with a soft non-contractile cicatrix. He then decided on injecting subcutaneously a solution of nitrate of silver (1 in 2000) in a double row of punctures at a distance of one centimètre from each other around the sore; cicatrisation took place from the edges. To repress exuberant granulation, he recommended a stronger solution (1 in 10).

A Rare Case of Self-Mutilation.—Dr. Thiersch related the case of a man who had circumcised himself at the age of eighteen. In 1870, being then married and a father, he slit up the hypogastrium from the symphysis pubis to the umbilicus, so that the omentum protruded; his object being, as he said, to obtain a view of his interior. Although the knife which he used was dirty and blunt, the wound healed after the removal of the omentum. A year later, he laid open one side of the scrotum. The prolapsed testicle was replaced while he was in hospital, and the wound healed without interruption. In 1880, he again laid open his abdomen; the wound healed in fourteen days, notwithstanding prolapse of the omentum. In May 1880, he removed his right testicle, and himself sewed up the wound. Four weeks later, he treated the left testicle in the same way; the spermatic cord, however, escaped, and a hæmatoma, as large as a child's head, was formed, on account of which he was admitted into hospital. The man acted under the influence of an uncontrollable impulse, and had no quiet until he was completely castrated.

The Circulation in the Lower Limbs.—On the occasion of the extirpation of a mass of degenerated lymphatic glands in a case of cancer of the penis in a man aged 49, Dr. Maas (Freiburg) was obliged to tie the femoral vein above the entrance of the saphena. Within the first three and a half hours the limb became first dark red, then bright red, then livid. After this, it resumed its normal colour; but the temperature continued high for twelve hours. On the twelfth day, the femoral artery was tied on account of secondary hæmorrhage. This was immediately followed by abnormal sensations in the leg; and, on the third day afterwards, there was gangrene extending above the malleoli. Hæmorrhage recurring some days later, the peripheral end of the femoral artery and the profunda artery were tied. The man, who was tuberculous, died. Dr. Maas had arrived at the conclusion that the femoral vein alone did not carry all the blood from the lower limbs, but that this function might be partly performed by the two or three gluteal veins; not in ordinary circumstances, but only when the valves were insufficient in consequence of increased blood-pressure, or when the veins had become distended in consequence of the gradual compression of the cutaneous veins by a growing tumour.

Amputation of the Tongue by the Thermo-Cautery.—Herr von Langenbeck said that, as the mortality in cases of extensive cancer of the tongue operated on by his own method and that of Regnoli and Billroth was 36 per cent., he tried the thermo-cautery, especially with the view of ascertaining whether it better fulfilled the indications of removing the whole disease, reducing the amount of hæmorrhage, and protecting the air-passages against the entrance of blood and secretions. In seven cases operated on in this way, he had only one death, from pneumonia. It also appeared to him that local returns of the disease were better avoided by this than by other methods. In order to avoid accidental burning of the mouth, he had had Whitehead's mouth-speculum provided with protective plates for the lips and gums. The only disadvantage of the method was the long duration of the operation, as slow division of the tissues was advisable. He had had the ordinary thermo-cautery knife curved on the surface, in order more easily to reach the base of the tongue.—Herr Küster believed that primary cauterisation of the wound with chloride of zinc was sufficient to prevent putrid decomposition of the secretions and phlegmon of the neck during the after-treatment.—Herr Bardeleben acted in the same way as Herr Küster, and was satisfied with the result.—Herr Gussenbauer preferred operating with the knife, as only in this way could a correct diagnosis of the character of the cut surface be made.—Herr von Langenbeck said that a case of cancer of the tongue, on which he had operated by the thermo-cautery in 1878, had remained free from relapse.

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Exarticulation at the Hip-Joint: Modification of Esmarch's Bandage.—Dr. Trendelenburg (Rostock) described a modification of Esmarch's bandage in exarticulation of the hip-joint with an anterior flap. The knife being entered in the same direction as in Lisfranc's operation, a sharp steel plate was thrust in front of the neck of the femur through the soft parts, and an India-rubber tube was wound in a figure-of-8 fashion around its projecting ends, so that there was no hæmorrhage in forming the anterior flap. The joint having been opened, a second piece of steel was applied behind in the same way, and the posterior flap was formed. Single arteries could then be tied at leisure; the hæmorrhage was very slight. Dr. Trendelenburg had employed this method in four cases; one was a case of tumour, which, together with the limb, weighed 57 pounds; the remaining weight of the patient being only 65 pounds.

Properitoneal Hernia.—Dr. Trendelenburg related a case of properitoneal hernia, which came under his notice with symptoms of strangulaton. Externally, only a moderate enlargement of the right half of the scrotum was perceptible; palpation and percussion, however, ascertained the existence of a large swelling in the right half of the abdomen, reaching nearly to the umbilicus. On opening the hernial sac in the scrotum, a quantity of sanguineo-serous fluid escaped from the abdominal tumour, which was then ascertained to consist of a loop of intestine with omentum. As the neck of this large sac lay high up, near the umbilicus, Dr. Trendelenburg made an incision in the linea alba, and reduced the hernia, which had been strangulated eight hours. This kind of hernia was the result of abnormal development of the processus vaginalis of the peritoneum.

Suture of Nerves.—Dr. Busch (Bonn) remarked that failure in this operation need not cause anxiety. He recommended that in such circumstances the wound should be opened, and any abnormal state of the cicatrix corrected. Six months ago, in an unsuccessful case, he had in this way discovered that the persistent paralysis was due to lateral displacement of the segments of the nerve; electric stimulation of the peripheral end was followed by reaction. The paralysis was cured by stretching the nerve.

Daily Variations in the Size of the Human Body.—Dr. Merkel (Rostock) communicated some interesting observations on this subject. By measurements of himself and others, he had found that a man in the morning, while lying down, was five centimètres (nearly two inches) taller than while standing in the evening. This shortening was produced by compression not only of the intervertebral substances, but also of the cartilages of the joints. In the hip-joints, the heads of the femora lay about a centimètre deeper in the acetabulum during lying than during standing. Weber's well-known hypothesis of the mechanism of the hip-joint bone required correction.

Bloodless Operations.—Dr. Julius Wolff (Berlin) spoke on this subject. By a series of researches on the temperature of the closed hand, he had obtained direct evidence that the effects of the vaso-motor paralysis following constriction could be considerably diminished and shortened by elevation of the limb. For example, a bandage was tightly applied to each arm of a man. Before its removal, the right arm was raised; the left remained horizontal. The temperature in the right arm rose during the next ten minutes from 28.5 to 32.5 deg. Cent. (83.3 to 90.6 Fahr.); while fifteen minutes were required for the elevation of the temperature of the left arm from 28.4 to 29.4 deg. Cent. (83.1 to 84.9 Fahr.) As a result of these observations, the author had endeavoured to ascertain whether Esmarch's endeavour to obtain entirely bloodless operations might not be simplified in such a way that the main vessels alone might be tied, and that the duration of compression of the stump might be limited to the quarter or half hour following the removal of the elastic tubing. At his suggestion, Herr Bardeleben had performed transcondylar amputation of the thigh in the following manner. Constriction having been applied, the limb was amputated; the main vascular trunks alone were tied; a compressing bandage was applied to the stump; the limb was elevated; and the elastic tubing was removed. After an interval of twenty minutes, the compressing bandage was removed, the edges of the flaps were stitched together, a bandage was applied, not tightly, and the stump was elevated. After the removal of the compressing bandage, it was not necessary to tie a single vessel.

Portable Apparatus for Club-foot.—Dr. Julius Wolff (Berlin) had seen remarkably rapid and complete results follow the use of his apparatus for club-foot—a combination of the pasteboard apparatus with the plaster-of-Paris bandage; but he had lately modified it by the application of a soluble glass bandage. Over the pasteboard splint he placed a soluble glass bandage, over this a provisional gypsum bandage; and, while the gypsum was hardening, he brought the foot into shape with considerable force. At the end of four days, the gypsum bandage was removed, leaving a very thin, light, and durable soluble glass bandage, which lay on the foot like a thin hard stocking. Over this the patient wore an ordinary stocking and shoe, and walked long distances daily for several months, without the least injury to the apparatus.

(*To be continued.*)

REVIEWS.

RECENT REPORTS ON BATHS, HEALTH-RESORTS, AND MEDICINAL WATERS.

1. *La Bourboule Actuelle.* Par le Dr. AD. NICOLAS. Paris: G. Masson. 1881.
2. *Guide Médical aux Eaux de Royat.* Par le Dr. A. PETIT. Paris: J. B. Baillière.
3. *Guide Médical à Contrexéville.* Par le Dr. Debout d'Estrées. Second edition, 16mo. pp. 216. Paris: 1881.
4. *Der Badearzt; Organ für die Interessen der Curärzte und Curorte.* Vienna: March 1, 1881, No. 1.—*Illustrirte Internationale Balneologische Ausstellungs Zeitung.* Frankfort: May 1, 1881, No. 1.
5. *Les Eaux Thermales de Brides-Les-Bains et de Salins Montiers.* Par le Docteur C. LAISSUS. Paris: J. B. Baillière. 1881. 8vo, pp. 114.
6. *Brides et Les Eaux Thermales Purgatives.* Par le Docteur L. DESPREZ. Paris: Delahaye et Cie. 8vo, pp. 67.
7. *Handbook of Madeira.* By J. M. RENDELL. London: C. Kegan Paul. 1881.
8. *Jamaica, a Home for the Invalid, etc.* By L. RUSSELL, LL.B., and LOGAN D. H. RUSSELL, M.D. London: Unwin Brothers. 1879.

9. *Colorado for Invalids.* By S. EDWIN SOLLY. Colorado Springs. 1880.

10. *On the Mont Doré Cure and the Proper Way to use it.* By HORACE DOBELL, M.D., etc., 8vo, pp. 179. London: J. and A. Churchill, 1881.

1. The mineral waters of Auvergne continue to be in high favour, and to produce a large literature, some of the last specimens of which are now before us. The four chief watering-places of Auvergne are Mont Doré, St. Nectaire, Royat, and Bourboule. The last two are comparatively modern. One of the circumstances that has conduced to their rapid growth is the detection in them of arseniate of soda, the maximum quantity of which in the litre may be stated thus: Bourboule, .028; Royat, .0045; Mont Doré, .00096 gramme. All these places have excellent thermal waters, which, we venture to say, would be valuable, even if it were found that no fraction of a grain of arsenic were present in them (two of them—Mont Doré and Bourboule—having the advantage of a mountain climate). Arsenical waters are now the special boast of the French, and every mineral station endeavours to show that it contains some particles of arsenic in its springs. There has been a long and violent warfare between Mont Doré and Bourboule, about the quantity of arsenic that they can produce. It is now admitted (after a very long controversy, and after most differing analyses of the waters of Bourboule) that the waters of Bourboule contain a far larger amount of arsenic than those of Mont Doré do. The waters of Mont Doré contain but a very small amount of other salts, while those of Bourboule have a very considerable one; and it is, therefore, contended that the small amount of arsenic at Mont Doré, being unencumbered with salts, is at least as efficacious as the larger amount of it in the more heavily charged waters of Bourboule.

After all, these disputes are not very important, for it is extremely doubtful whether any one at either station has ever been able to drink enough of the waters to induce any decided symptoms of arsenical action on the system, although to many enthusiasts they are very apparent. The strange point in the question is, that French authorities generally aver that the arsenical action of the waters of Mont Doré is more pronounced than that of the waters of Bourboule, although, as we have said, those of the former are very much weaker than those of the latter. The doctors of Bourboule very naturally persist in asserting that they possess the arsenical preparation *par excellence*, and can consequently give the most complete arsenical treatment. M. Nicolas, in his recent treatise, gives a history of Bourboule, of the varied analyses of the waters, of the many fights that have occurred among the companies that have acquired them, and of the rumours persistently spread that the supply of water was running short. He winds up by stating that the present condition of Bourboule is most flourishing, and by saying that, whereas the wells gave 35 litres a minute in 1858, and 52 litres in 1866, they now yield 632 litres, and supply 2,500 baths daily. We cannot follow M. Nicolas into all the details he gives of the place, of the waters, of their physiological action, and of the diseases for which they are appropriate. These are, as in most watering-places, by no means few in number. But the specialities of Bourboule are skin-diseases and scrofula in its various forms, especially in the young. Bourboule has become the thermal station for children, who thrive there wonderfully.

2. The rising, we may say the risen, station of Royat is very fortunate in its guide-books. Some time ago, we had occasion to notice a popular guide-book to it, which was quite a model of its kind. That now before us, Dr. Petit's *Medical Guide*, is as complete as a work of the sort can be, and gives every information respecting the place, and the diseases to be treated at it. He had already written on the chronic maladies which find relief there. It may be said generally that Royat lays itself out specially for the treatment of arthritic complaints, not omitting affections of the respiratory and nervous systems, and anæmia; that its waters contain, although less arsenic than those of Bourboule, yet a great deal more than those of Mont Doré; that they yield more lithia than any waters in France, and that they are considered to be analogous in action to those of Ems in Germany. Dr. Petit's little work, which is neatly printed, contains an excellent geological map of the neighbourhood, showing all the mineral waters. He had already published an admirable geological map of the volcanic district of Auvergne, and of its springs, and he now projects a similar map of the whole of France.

Royat has the advantage of being close to Clermont and the railway, an advantage which will be speedily possessed, if it is not already so, by Bourboule and Mont Doré also, which are now not far from the Bordeaux and Lyons Railway.

3. This is another of those guide-books which they get up so neatly in France, and written by one who has studied the waters minutely for the last twelve years. What the book has chiefly to announce is, that since March last Contrexéville is directly accessible by railway, and that it has got a new casino and reading-rooms. Medically, the chief novelty is that the waters have been found efficacious in that intractable malady, incontinence of urine in children. The waters were originally employed chiefly in gravel, gout (especially atonic gout), and vesical catarrh. Latterly they have been used successfully in gouty diabetes and in hepatic colic. The number of diabetic patients has greatly increased of late.

Dr. Debout d'Estrées justly remarks that the number of permanent cures would be larger, if patients would only adhere, after their return home, to the hygienic rules that had been prescribed them during their cure. We fear that this applies to many classes of patients, but especially to the diabetic; and the observation is of general application to visitors of most baths.

4. The appearance of two new weekly journals of balneology is a sufficient indication of the interest taken in that science in Germany. The former of them appears in the first instance as a supplement to the *Allgemeine Wiener Medicinische Zeitung*. The latter it is intended to issue only for five months, or as long as the Frankfort Exhibition for the Protection of Patents and Samples remains open. Balneological apparatus and plans of bath buildings form an important section in the exhibition, and will be fully described in the journal. Both journals are full of interesting matter (the Vienna one giving accounts of many a bath quite unknown to the English public), and their pages are by no means confined to strictly balneological questions. The operation of electricity and the action of climatic cures, for instance, are discussed at large. One is much struck with the breadth and extent which the subject is assuming in all its branches. This is also very observable in the proceedings of the balneological

section of the Society of Medicine, which has just held its third meeting at Berlin, when, among others, papers were read on the History of Climatic Cures, on the Use of Whey, a very elaborate one on Digestion, and another on the Relation of Government to Bath Establishments.

5. Dr. Laissus has laboured indefatigably for the last twenty years to bring the waters of Brides into notice. They are situated in a pleasant valley in the Savoy Alps, and may be described to English readers as not being very distant, either from Aix Les Bains, or from Mont Cenis. These waters, which we have noticed before, are undoubtedly important ones. They are the only French ones which, in their particular way, vie with German waters of the same class. Brides has a sulphated spring, and in its operation its waters resemble Carlsbad in many respects. They are useful, among other complaints, in liver, in constipation, and hæmorrhoidal congestions, and latterly have become popular for the cure of obesity. M. Laissus very properly observes, that he does not wish to follow M. Philbert in making a speciality of this, especially as obesity cures are not lasting, and are therefore disappointing. He thinks the Brides waters very efficacious in old intermittents and enlarged spleen. The neighbouring waters of Salins are strong salt waters, which enter into competition with Kreuznach and Nauheim—possibly even with Homburg and Kissingen. They are used both internally and externally. They are essentially stimulating, suited especially for scrofulous children, for chlorosis, and some uterine affections, and for paralytic cases requiring stimulation. Establishments are growing up, and the railway is daily approaching nearer.

6. Dr. Desprez has been engaged for some years in the study of the waters of Brides and Salins, and has written several good *brochures* on them, of the last of which we have given the title above. In essentials he agrees with Dr. Laissus, but he points out that, in comparing the waters of Brides with Carlsbad, it has been forgotten that, along with their resolvent powers, those of the former place are also tonic, while those of the latter one are very distinctly lowering.

7. This book appears to us to be a very sensible one, and to convey in small compass a great deal of information about Madeira. It ought certainly to be very useful to persons intending to visit that delightful island. It is unnecessary to enter here into any disquisition respecting its singularly equable and somewhat humid climate. It appears to be in all respects the converse of the stimulating atmosphere of Colorado, as it has been recently described.

On the whole, Madeira is now out of favour with invalids—we think to an unnecessary extent. Its popularity will probably revive, according to the cycle of fashion which prevails about such places; and the absolute knowledge we have of its climate is in favour of its being employed for properly selected cases. There is less uncertainty about the climate of Madeira, than about that of many of our southern sanitary resorts.

8. Although this paper is written for the express object of recommending Jamaica to immigrants and to invalids, the remarks which Dr. Russell offers on its climate are well worthy of consideration.

The island, from its position and great irregularities of surface, presents a vast variety of climates; so much so, indeed, that for mere change of climate, an invalid need scarcely quit its shores. He may live at Kingston, at the level of the sea, or proceed to Newcastle, 4,000 feet above it; and if greater elevation be required, there is almost unlimited scope, as the culminating peak of the Blue mountain reaches the height of 7,335 feet.

The late Lord Metcalfe said that 'the climate of about 1,200 feet above the sea-level was perfection'; and Bryan Edwardes, in his history, long ago said, 'If the interval from the beginning of December to the end of April be called winter, it is certainly the finest winter in the globe: to valetudinarians and persons advanced in life, it is the climate of Paradise'.

The late excellent Dr. Bowerbank of Kingston wrote of pulmonary complaints as follows. 'Where a predisposition to tubercular or scrofulous disease exists, a residence here will completely check its development: and even during the earlier stages of tubercular consumption, if its progress be not arrested, life is often prolonged and divested of much of its suffering.' 'In an advanced form of the disease,' says Dr. Russell, 'if the patient will select a residence at a more elevated station, such as Newcastle, though softening and disintegration of the pulmonary tissue be in progress, provided it has not gone too far, a total cessation of such process, with cicatrisation and ultimate contraction of cavities, is a change that may be hopefully contemplated.'

Jamaica, like Dominica, and others of the West Indian group of islands, contains several mineral springs, one of which is thermal, and has been found of much use in rheumatic, arthritic, and cutaneous affections. There is also an aluminous chalybeate among the higher mountains, useful in anæmia. But all those wells are lacking in accommodation for visitors, which we fear will not spring up, unless the European population increase very greatly. Before parting with Dr. Russell, we cannot but ask, why he alludes to the natives of Franconian Switzerland in particular, or tells them that their mountains are higher than those of Jamaica, which they certainly are not.

9. Mr. Solly wrote, in 1876, a good account of the Manitou Springs in Colorado: he now gives a more general view of the influence of the climate of that elevated district. In the following abstract we let him use his own words.

We have in Colorado a dry, bracing, cool climate, with an abundance of sunlight, and an aseptic and highly electric atmosphere, at an elevation varying from four to eight thousand feet. Beautiful mountain scenery and the vast plains are there to supply us with unlimited air, untainted by cities and vegetation.

If a patient come here in the early fall, he has time to pick up strength to enable him to expose himself with advantage to the cold of winter, which is at times quite severe. The days, for the most part, are bright and warm, but the nights are often intensely cold. All the year round they are cool. There is very little snow, and it falls mostly in early spring. On about a third of the days of winter, the mid-day meal may be taken out of doors. The great drawback to the enjoyment of the Colorado climate are the winds, which blow mostly in the spring months. Except to the very feeble, however, they are rarely more than disagreeable. There is no rain to be looked for from the middle of September to the middle of April, but there are frequent thunder showers of short duration. These cool the

air, but never make it damp enough to be dangerous to the consumptive. The changes of temperature are sudden and extreme, therefore the visitor must be provided with extra wraps; and at no season can he dispense with warm under-clothing.

Colorado is topographically divided into plains, foot-hills, and mountains. The plains present little or no vegetation beyond the buffalo grass, and are only watered by small and unfrequent streams. Their elevation varies from 3,500 to 4,500 feet. There is no accommodation to be found in this portion of the country, especially for invalids; but when a patient is able to stand the rough living of a sheep or cattle ranch, and the monotony of the life does not pall, he is often cured by the pure air of the plains. The foot-hills average from 4,700 to 7,000 feet in elevation, and have several towns and villages among them, which attract the bulk of the invalids. They are of medium elevation; but are adapted for the majority of patients, and most suitable for residence in both summer and winter. The chief of these are Denver, Colorado Springs, Manitou, Pueblo, and Cañon City.

Denver is too much of a city, and not recommended. Colorado Springs, at a height of 6,023 feet, and tolerably well sheltered from the winds, and well laid out, is a much more desirable place for an invalid. But Manitou, two hundred feet higher, is evidently the best place. The springs, which are cold, contain much carbonic acid, have more or less soda, and some iron. They are peculiarly adapted for the dyspepsia of the consumptive. Pueblo and Cañon City are not praised. During the summer, there are many places in the mountains open to invalids for change, and resorted to with benefit.

The broad principle is as follows. Send the thin-blooded to Colorado: keep the full-blooded away. Send those on the up grade of life, and not on the down. In disease, except in that of the lungs, where there is active change of structure, avoid the too rapid life which the climate causes: hæmorrhage, other things being equal, is less frequent at this altitude than on lower ground. The expediency of a particular case of consumption coming to Colorado depends chiefly on the extent of mischief, and the amount of reserve force in the patient to stand the stimulus of the climate.

10. This book brings together, in an English form, a quantity of information about Mont Doré and the treatment pursued at that place; but, as far as we observe, scarcely fulfils its object of showing us the proper way to use it in this country. The proposed establishment of a great sanatorium at Bournemouth has attracted a good deal of interest, and we expected to find in this work something tolerably definite respecting the treatment about to be adopted there. But what we gather from Dr. Dobell amounts to this, that heated water will be used in the form of baths, aspiration rooms, pulverisation, etc.; that sea water will be occasionally employed; and there is some allusion to the probable internal use of imported Mont Doré water. All this is merely hinted at in a meagre fashion.

We have long been of opinion that it would be well if the more systematic treatment pursued at many French and German springs were to be introduced at some of our English spas, and the experiment now to be made is in that direction, and on that account we wish it success; but we confess we do not expect much from the scheme, as an introduction to the Mont Doré treatment. Nevertheless, the sanatorium may succeed as a hotel, and in the way of a hydropathic establishment, for many of these now owe their reputation less to cold-water cures, than to their Russian vapour and their Turkish heated air baths. No doubt they will after a time master the difficulty at Bournemouth, of finding both physicians and servants who are familiar with the details of Mont Doré and similar treatment; for we may say, in passing, that many of the features of treatment are common to other places with Mont Doré. Still certain differences will remain, which cannot be got over. Mont Doré has a mountain, Bournemouth has a seaside climate. The one has natural warm waters; the other has only common water, which will on every occasion have to be heated. The one has mineral waters, containing carbonic acid and salts; the other, except when it has recourse to the sea, has only ordinary water. It is true that the Mont Doré waters are feebly mineralised, and it has been said of them, and of similarly constituted waters, that their virtues are only those of warm water; but it is to be remembered that the physicians who apply the Mont Doré waters have unbounded faith in their special virtues, consider them to be something much more powerful than plain hot-water, and attribute a great deal of their success to their small amount of soda and arseniate of soda, especially as operating in the form of aspiration. In fact, they think they can distinctly trace arsenical action. We are told that Dr. Tidy was deputed to inspect Mont Doré, and that he analysed the waters. Curiously enough, this book does not contain any analysis of the water, either by French authorities or by Dr. Tidy; but, as far as we can follow imperfect data, the latter attributes a larger quantity of arseniate of soda to the Madeline Spring than the former do.

We have already said that there is a good deal of information, chiefly in the form of extracts from various waters, to be found in this work, though in a somewhat undigested state; but we have also a good deal of matter which might have been spared.

The first twenty pages are occupied with what has been already published as a prospectus to the Bournemouth Sanatorium: the last forty pages consist of extracts solely from the author's former works, chiefly referring to the share which the liver has in pulmonary consumption, and to the general conclusion at which he has arrived (which the French have been propounding for a long series of years), that to treat diatheses is the one important matter in therapeutics. Twenty pages of abstracts of Dr. Dobell's works follow in the shape of advertisement; but this may be the bookseller's part.

As far as we have observed, the facts about Mont Doré are correctly enough given; but we have observed a few slips. We see that, in one extract he gives from the *Med.-Chirurg. Review*, he introduces the name of a Dr. Rehden, ascribing to him lines which he never wrote. Dr. Dobell somewhat credulously adopts Dr. Althaus's statement, that Julius Cæsar bathed at Mont Doré, simply because, as in almost every ancient bath, there is a Kaiserbad. But the most comical error is where, writing apparently of the physicians of Mont Doré, he introduces Sidoine Apollinaire of the fifteenth century, meaning Sidonius Apollinaris, a bishop of the fifth, who mentioned some of the waters of Auvergne as 'Calentes Baiæ'; very possibly, but not certainly, Mont Doré.

The book is, on the whole, disappointing, more especially as one intended to initiate a new era; for Dr. Dobell, 'regardless of the distinctions of friend or foe, creed, race, class, or nationality', 'is alone

responsible for introducing the so-called Mont Doré treatment into this country'. The treatment at Bournemouth may prove successful; but, where the elements of cure are so different, it must always remain, to use Dr. Dobell's own words, only the 'so-called' Mont Doré cure.

J. MACPHERSON, M.D.

Malaria and Injuries of the Spleen. By E. G. RUSSELL, M.B., B.Sc., Lond. Calcutta: Thacker, Spink, and Co. 1880.

THE author of this treatise presents it to the medical profession as the outcome of seven years' medical practice in one of the most malarious regions of India—Lower Assam. It embraces two distinct subjects, although both are concerned with the spleen. The first part treats of malaria, the second of the essentially tropical one, injuries of the spleen. Malarial questions are considered under the following heads:—malaria generally, which has received discursive treatment in the first chapter; the action of malaria upon the various viscera and the blood; and this part is concluded by a theory of the mode of action of malaria, which is certainly ingenious, and, if a little wanting in the subtlety which is in general attributed to the action of this particular *materies morbi*, it is nevertheless worthy of due consideration, as coming from one who has not only had much practical experience of the diseases which the so-called miasms cause, but who has also been at the pains to give the results of it to his brethren in the present volume. The author, in treating of the nature of malaria, first discusses the bearing upon the special question of the fact that all pyrexia is more or less remittent, and then proceeds to develop the view that intensity of the phenomena, which are expressed in remission and intermission, is explicable on the hypothesis that it is regulated by the intensity of a special poison, acting upon the sympathetic nervous system and its closely related organic muscular fibre. The work was written too late to take into consideration the researches of Klebs and Tommasi-Crudeli on the malarial poison of the Pontine Marshes; but, as the author says, they involve questions which stand or fall independently of those he has attempted to discuss.

The second part of the book treats of injuries to the spleen, and is very comprehensive. Moreover, a number of cases are given which must make it most valuable for reference; and inasmuch as rupture of the spleen is by no means devoid of interest medico-legally, Dr. Russell's careful work is worthy of attentive study. There is one omission which we may be permitted to point out in a work of much merit; and that is, the want of any consideration of the question of the relations of splenic enlargement of malarial origin to leucocythæmia. This is one of the questions of great importance both in pathology and in therapeutics. As far as information has carried us at home, no inconsiderable number of cases of leucocythæmia have previously had ague. Those who deal with enlargement of the spleen as an every-day occurrence in hot climates, should be able to give us some valuable information which would go far to settle a still undecided point. We, therefore, turned with curiosity to see what Dr. Russell had to say; but, alas, he also is silent—an omission that will need rectification in the next edition. JAMES F. GOODHART.

Transactions of the Calcutta Medical Society, 1880. Calcutta: P. S. D'Rozario and Co.

THIS modest volume launches the Calcutta Medical Society upon the world of letters. We wish it good speed; and if we may venture to criticise the book before us, we would say the next number would be all the better for some arrangement of the subject-matter. This is merely a reprint of the proceedings of the evening meetings from a medical paper. We are quite in accord with the editors that it is advisable to give the discussions on the various cases—or, at any rate, such of them as are of importance—for instance, that on acute œdema, in the present volume; but we think that the cases should be so arranged as to be accessible for reference without difficulty.

The contents range over the whole field of medicine and surgery, and indicate that the Medical Society of Calcutta, which, we take it, includes many native medical men, is enjoying a vigorous constitution. JAMES F. GOODHART.

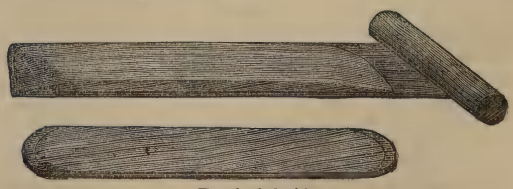
Notes on Rickets and Rickety Deformities, their Prevention and Treatment, with a notice of a visit to the Schools for Rickety Children in Turin and Milan. By MATHIAS ROTH, M.D. London. 1881.

FOR the prevention of this disease, a *bureau d'hygiene* is to destroy all unhealthy habitations, and to instruct the people. In treatment, a great variety of remedies are given, including arsenic, mercury, colchicum, sulphur, and compressed air baths. But the aim of the pamphlet is to advocate the movement cure as the 'only means by which a change in the deformed bones can be effected'! All mechanical treatment is condemned. E. NOBLE SMITH.

NEW INVENTIONS.

CARR'S SPLINT.

This splint is invented by Dr. Carr, an American surgeon, and has been much appreciated by various surgeons in England during the past year. In some respects it resembles a splint designed by Dr. Gordon of Belfast, but was quite independently invented. The construction will be understood from the accompanying drawing. The following description of the splint, and the mode of using it, is by Dr. Martin (late Staff-Surgeon, U.S.A.)



For the left side.

The length of the splint 'is eleven and a-half inches its width two inches. It consists of a strip of light wood one-sixth of an inch in thickness, on which is laid a carved wood "bed" of peculiar form, the irregularly convex surface of which is exactly adapted to the concavity of the lower side of the radius. An oblique cross-piece, or "bar", round, four inches long, and one inch in diameter, is attached to its distal end. A splint for the proper side is chosen, and along its upper surface is laid 'a quadruple fold of old cotton-sheeting, a little wider than the whole

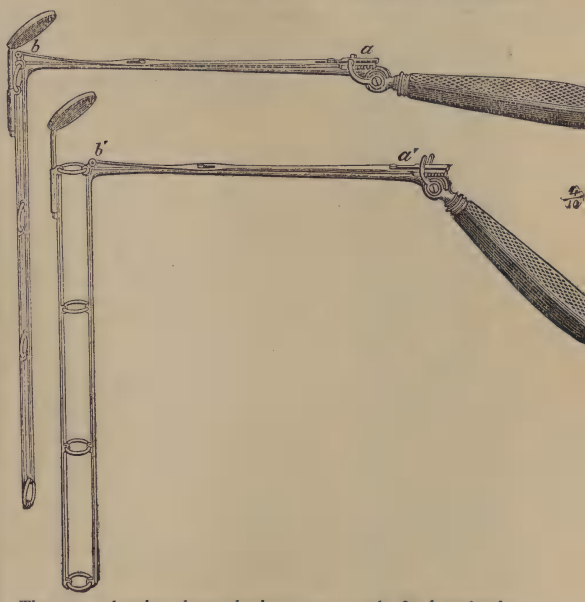
width of the splint, and extending from the cross-bar to an inch beyond its proximal extremity. The lower surface of the fore-arm is then laid on this, so that the cross-bar comes very exactly under the metacarpo-phalangeal articulations. Two or three turns of bandage may now be thrown around the middle of the fore-arm, binding it firmly to the splint, and the patient requested to grasp the cross-bar as strongly as may be; in this he may require the aid of the surgeon's hand. This action of the hand will reduce at once a very large proportion of all fractures of the lower part of the radius, and its doing so is a sufficient proof of the perfect adaptability of the apparatus for the lesion for which it is designed. Of course, the surgeon can, if he prefers, reduce the fracture before applying the splint; some cases require this to be done, and all those in which the fracture is complicated with subluxation of the two rows of carpal bones, which should be looked for sharply, and not placed in the splint till thoroughly put in proper position. A properly padded, very light, thin splint strip, about eight or nines inches long and two inches wide, may now be laid along the back of the radial side of the fore-arm from the carpo-metacarpal junction. This dorsal splint is not always absolutely necessary, but may as well be always applied. All that is now requisite is to bandage in the usual way; the bandage may extend upwards from the middle of the metacarpus to the proximal end of the splint, leaving—and this is very important—the fingers to be exercised and even used freely, for holding fork, spoon, etc. After the first week, the bandage need extend no further than to the carpo-metacarpal articulations, leaving the patient free and useful motion of the hand. If the bandage, however, is thus limited, the surgeon should see that the carpus is firmly and immovably attached to the splint; this may be well done by winding a strip of good sticking-plaster, an inch and a quarter wide, three times round the wrist and splint.'

The advantages claimed for this splint, that it relieves the patient of much discomfort and disability, allowing him to use his fingers and thumb, and thus, and by the excellent position obtained, prevents the stiffness frequently occurring after this fracture, are fully confirmed by the testimony of Mr. Cotterell, the house-surgeon of University College Hospital, who has treated four cases of Colles' fracture with them. The cases were not selected, but occurred in succession; in all, the splints were removed at the end of four weeks, at which time there was no deformity, except in one case, and perfectly movable wrists and fingers in all.

Messrs. Krohne and Sesemann of Duke Street, Manchester Square, are the London agents for this splint.

A NEW ŒSOPHAGOSCOPE.

This instrument consists of two parts—a stem and a skeleton tube. The stem is made up of a handle and a shank, between which there is a hinge. The skeleton tube is only formed when the instrument has been introduced into the gullet; before that, it consists of two flattened wires placed anteriorly and posteriorly, connected above and below, and at certain intervals between these points, by rings. When the rings lie in the vertical position, the wires are separated from each other only by the thickness of the rings; but, when the latter are thrown into the horizontal position, the two wires become separated, and, with the rings, constitute a kind of skeleton speculum. At the top of the back wire there is a slot, into which the stem of a laryngeal mirror is fitted. By the upper figure it will be seen that the handle and shank are almost in a line—a position which greatly facilitates the introduction of the instrument. When the 'body' has been passed down the œsophagus, the operator, holding the handle in his hand, but leaving the index-finger free, presses with the latter on the upper part of the shank near the handle. The result of this is to turn the rings from the vertical to the horizontal position, and thus to open the speculum and expand the gullet. With a view of causing as little irritation as possible before withdrawing the instrument, the operator should close the speculum by pressing the under part of the shank (near the handle) with his thumb. Tubes from three to five inches in length can be bolted so securely to the end of the shank, that they are as safe as if the whole instrument were made in one piece. This instrument has been manufactured



The upper drawing shows the instrument ready for introduction into the throat; the lower one, the same instrument *after* introduction.

by Messrs. Mayer and Meltzer, of Great Portland Street, under the direction of Dr. Morell Mackenzie, who has been using it for nearly a year.

MARIANI'S WINE.

We can speak very highly of Mariani's Wine as the most palatable and efficient preparation of coca leaves which has come under our notice. It is within our knowledge that when administered to persons suffering from nervous exhaustion and extreme mental and bodily fatigue, it has proved most grateful and restorative. Singers, public speakers, students, and others, have found relief from mental and bodily strain from its use, and we are inclined to think, as it becomes better known in England, it will be much more extensively employed. The wine can be obtained of Messrs. Roberts, 76, New Bond Street, W.

A NEW URETHRAL SYRINGE.

The treatment of urethritis, from whatever cause, is by injections; and no less important than the fluid employed is the instrument used in the application of that fluid. Glass syringes break, are unequal in calibre in different parts of the cylinder, the wadding of the piston contracts in drying, and a portion of the fluid fails to be thrown out when the syringe is used a second time. The only material for syringes is hard India-rubber. Even more important is the shape of the syringe. The worst possible shape is the one which has usually been employed, namely, the syringe with a long straight nozzle, 'No. 1', which reaches often past the seat of injury, the point of which scrapes and irritates the internal wall of the canal, and which is not well adapted to fully distend the meatus, nor to prevent the regurgitation of the liquid used. A few progressive physicians have used the ear-syringes 'No. 1, A' and 'No. 0', since these have shorter nozzles. The latter two, however, are of too small capacity to hold enough fluid to fully distend the urethra and obliterate the folds within which lurks the virus. A syringe of greater capacity and even preferable nozzle is the desideratum, and that exists in the syringe of Sigmund, employed in Vienna exclusively, and largely elsewhere in Europe. This is figured in German works, but also in Bumstead and Taylor on *Venereal Diseases*, p. 49, fig. 3. For the last ten years, Dr. Edward Wrigglesworth, of Boston, has endeavoured to influence some rubber company to take the risk of putting Sigmund's syringe upon the market at a moderate price. The Rubber Comb and Jewelry Company, 33, Mercer Street, New York, will in consequence, hereafter furnish Sigmund's syringes to wholesale houses at a price which will enable them to retail for a dollar or even less. Its Boston wholesale agents are H. P. Emerson and Co., 33, Kingston Street; and Codman and Shurtleff, Leach and Green, and others will have these syringes for sale. Dr. Wrigglesworth believes that it is the best as well as the cheapest syringe; and therefore asks physicians to recommend its use to their patients, its sale to their druggists. The accompanying drawing conveys an idea of the exact size and shape of this new syringe, which Dr. Wrigglesworth strongly urges upon the profession as the best syringe in existence for the treatment of urethritis.

McKESSON AND ROBBINS' CAPSULE PILLS.

These preparations have several points of special merit which will secure for them a favourable reception. The medicinal mass is covered while soft, and is quickly soluble. The ovoid form facilitates deglutition, thus avoiding the sickening sensation caused by round pills, which roll and tickle the throat in the attempt to swallow them. The smoothness and elegance of the little ovoid transparent capsules, the rapidity with which they dissolve, and the facility with which they are swallowed, will make them great favourites. The agents are Messrs. Burroughs and Wellcome, Holborn Viaduct, London, E.C.

ALBISSIMA NON-POISONOUS PAINT.

For the 'Albissima Paint' the following advantages are claimed, and, after investigation of the facts, we can endorse the claim. 1. It is absolutely non-poisonous. 2. Its covering power is far superior (by 25 to 50 per cent.) to any white lead in the market. 3. Its colour is unequalled in purity and durability by any other paint, and is quite unaffected by gas, or by an impure atmosphere, or by any ordinary chemical re-agent. 4. It is prepared in such a way as to be in a smoother and finer state than any other white paint, and, consequently it is well adapted for admixture with colours to make delicate tints (avoiding chrome yellow and emerald green). 5. The great ease of its manipulation under the brush secures great economy of time and labour. It works freely, and the brush does not require daily cleansing. The paint need not be kept under water when the cask is open. 6. It does not require straining, therefore the serious loss of weight (as, for instance, with white lead) is avoided. 7. It protects metallic surfaces, without attacking them. 8. It is unaffected by vermillion and French ultramarine.

Albissima may be used in the same manner as white lead, but with a greater proportion of 'thinnings' and driers (say about 4 per cent. liquid driers). For flatting, add small proportion of varnish. Further particulars may be obtained upon application to the Company's offices, 34, Lime Street, London, E.C. As an innocuous paint, it has strong claims upon the attention of medical men. Albissima is one of the most brilliant of modern discoveries. Householders, architects, and managers of public institutions should permit no other paint than albissima to be used.

CHLOROFORM AND CHLORAL-HYDRATE IN COD-LIVER OIL.—Dr. Hager states that the addition of 10 drops of chloroform in 100 grammes of cod-liver oil renders it perfectly agreeable and palatable to take, without the slightest degree impairing its therapeutical value; or 10 grammes of crystallised pure chloral-hydrate, dissolved by digestion in a sand bath in 200 grammes of cod-liver oil, renders the oil more palatable. The latter is recommended in consumption; it diminishes night-sweats, produces sound sleep, and improves the appetite. The dose is from four to six tablespoonfuls daily.

THE LONDON MEDICAL RECORD

ILLUSTRATED GUIDE

TO SELECT EXHIBITS

AT THE APPROACHING

MEDICAL AND SANITARY EXHIBITION AT SOUTH KENSINGTON.

Preliminary Notice.

From the 16th July to the 15th August the medical profession from all parts of the Kingdom, the Continent, and America, will be flocking to the Metropolis to attend the great International Medical Congress to be opened on the above-named date. Sanitarians too, will in all probability muster in great force, attracted in some measure by the Exhibition to be opened simultaneously with the meeting of medical scientists. Judging from the number of entries at South Kensington, and the diversity of the exhibits, there will be few appliances connected with medicine, surgery, sanitation, or domestic utility, bordering upon the lines of public health, that will not be shown or represented in the great building at South Kensington. Unfortunately, the full list of exhibits, as a rule, is not completed until the last moment; but we shall endeavour, by diligent inquiry, to place before our readers as complete a description as circumstances will permit, of the array of novelties and useful appendages that will be brought together for their inspection, before the Exhibition opens. These descriptions we purpose to reprint in the form of an independent pamphlet, and to present the work gratuitously to every visitor of the Exhibition. The London Medical Record and the Sanitary Record will be represented in the building, and from our stand the current numbers of each Journal may be obtained on payment, in addition to our gratuitous 'Illustrated Guide'. We earnestly request all the exhibitors to supply us with a list of their intended exhibits, and volunteer to illustrate any specialities worthy of notice, free of charge; therefore, on themselves will rest the onus if our descriptive pamphlet falls short of what we are desirous it should be. With these few remarks we shall at once proceed to describe the Exhibits, so far as the particulars have reached us.

THE MEDICAL EXHIBITS.

As a large number of the Medical Exhibits are from the Continent, and some from America, we are not enabled, although we have applied to the Exhibitors for a full description, to give them in detail in this number of the London Medical Record, owing to their not having come to hand; our readers must therefore be content to receive them from us as they have been entered. We shall rectify this, so far as we are able, in the next number, and in our remarks on the Exhibition when open.

Messrs. Young and Postans, 35, Baker Street, London, W. Their exhibits will include the following collection of 'Medicated Effervescent Granules', and other Pharmaceutical preparations: Granular Effervescent Bismuth and Pepsine; Granular Effervescent Bismuth, Pepsine, and Steel; Granular Effervescent Bismuth, Pepsine, and Quinine; Granular Effervescent Bismuth, Pepsine, and Strychnine, (introduced at the suggestion of the late Dr. T. H. Tanner); Granular Effervescent Bismuth and Iron; Granular Effervescent Bismuth, Iron, and Strychnine; Granular Effervescent Bismuth, Iron, and Quinine; Granular Effervescent Iodate of Iron; Granular Effervescent Iodate of Quinine. (Introduced at the suggestion of Dr. C. Cameron.)—Granular Effervescent Hypophosphites of Lime, Iron, and Soda. Young and Postans' 'Phosphorised Cod-Liver Oil' — Phosphorus Capsules, Phosphorus Pearls, Phosphorus Emulsion, prepared as suggested by Professor Redwood.—Resorcin; a fine specimen made by Merck of Darmstadt. Eugenol; pure natural Salicylic Acid; Goa Powder, and resublimed Chrysophanic Acid; Wood Oil, or Gurjun Balsam, for Leprosy; also, Liquid Extract of Ergot and Digestive Solution of Pepsine, from Messrs. Hamilton, Long, and Co,, the State Apothecaries, Dublin. Maw's New Precipitate Collector, Hollow Suppositories with Stoppers, Pessaries, and Bougies, Enema-Apparatus, Invalid's Requisites, and a Stand containing a Complete Set of Apparatus and Re-agents for Testing Urine; and a Portfolio, etc., containing a Collection of Clinical Temperature Charts, as used at various hospitals in England, Scotland, and Ireland.

The aërated waters to be exhibited by Messrs. Blake, Sandford, and Blake, are intended to afford accurate doses of the ingredients from which they are named, and not merely accurate, but sufficient also to effect the purpose desired by the prescriber. As has been frequently seen of late, by reports of examinations performed by Public Analysts, under the authority of the 'Sale of Food and Drugs Act', the terms 'Soda', 'Seltzer', 'Potash', etc., have been indiscriminately applied to water charged with fixed air, although in many cases containing no alkaline ingredient, or, if any, an inappreciable quality. This may be well enough where only an effervescing draught is required; but both doctor and patient will be glad to be assured that they can be supplied with the prescribed remedy in so agreeable a draught. In addition to aërated waters, Messrs. Blake will exhibit a soluble combination of Guaiacum and Lithia, to be administered in the form of pills; and capsules containing Thymol, which was prescribed with advantage in cases of dyspepsia by the late Dr. Leared.

Messrs. Mackey, Mackey and Co., Bouverie Street, E.C., will send a collection of chemicals used in medicine, manufactured by Mackey, Mackey and Co., preparations of Phosphorus, Bismuth, Iron, Cerium, Iodine, Bromine, Potassium, Zinc, Lead, Mercury, Sodium, Morphia, Strychnia, Quinine, Acids, Liquid Extracts, Decoctions, Infusions, Tinctures, Syrups, Wines, and Liquors; also special preparations of Quinquinine, Bismuth, Cerium, Cod-Liver Oil, Salicylic Acid, Saxceres Bark, and Iron, Beef and Iron, Epulixon, Chlorodyne, Santal, Copaiba, Chian Turpentine, Cantharides, Effervescing Saline, Collodion, Chloral-Hydrate, Croton-Chloral-Hydrate, Euonymin, Iridin, Pepsin, Salein, Podophyllin, Barks, Roots, Gums, Leaves, Pills (pearl-coated and capsuled), Suppositories, and Disinfectants.

Messrs. J. and C. Lloyd and Co., Verulam Street, Gray's Inn Road, will exhibit their patent Cooked-Malted Farinaceous Food, in various sized canisters. This article is alike suitable for infants, children, and adults, either in health or sickness. It requires neither boiling nor straining. It is composed of the most nutritious and finest selected cereal grains and pulse, combined with the active constituents of pure fresh malt meal, in such proportions as to render the mixture as nearly as possible chemically identical with the constituents of the human body itself. It is therefore valuable for every-day use, both in health and sickness, and for every condition of life; alike suited to the youngest child, the most robust adult, and the weakest invalid. Being thoroughly cooked, it is quickly and easily made; and being palatable, it is attractive, instead of, as so many foods are, repulsive. This New Food is unlike any other, having special qualities and virtues of its own, such as are possessed by nothing else. It is excellent for breakfast, instead of bread-and-milk or bread-and-butter, for dinner is delicious as custard with stewed fruit, or as baked pudding, and is of inestimable value for supper. It also contains the greatest amount of nutriment in the smallest bulk, and in the most convenient and easily-digested form. It is presented to us with high credentials,

and Professor Attfield, F.R.S., etc., who has made a chemical analysis and microscopical examination of it, calls it 'a true food, rich in all the elements necessary to the formation of flesh, fat, bone, and muscle, and therefore greatly superior to mere starchy foods'.

MISCELLANY.

MENTHOL.—This drug is insoluble in water, but dissolves readily in alcohol, ether, or glycerine. It is recommended in the *New York Medical Journal* to relieve neuralgia. Paint the painful part with a solution of the strength of one grain to ten minims of alcohol.

TRIBASIC PHOSPHATE OF SILVER IN NERVOUS DISEASES.—This salt of silver has been used recently with marked success in the treatment of inveterate epilepsy, locomotor ataxia, acute myelitis, etc. Dr. McLane Hamilton, of New York, states that a persistent use of this remedy will do more for the patient than any of the drugs hitherto used. The dose is from one-third to one-half a grain, given in glycerine and water.

CITRINE OINTMENT.—Mr. Peter Squire gives, in the *Pharmaceutical Journal*, the following directions for making citrine ointment, without failure. The mercury and acid are put into a wide-mouth bottle or flask, and whilst the action is going on, the vaseline is heated in a water-bath to 180 deg. F. If the mercury is not completely dissolved, the flask is held in the water-bath till it is; it is then poured into the vaseline, and the whole stirred till cold. One part of this ointment, with three of vaseline, has been used by the oculists, and highly approved by them.

ANTISEPTIC SURGERY.—The Jacksonian Prize has been awarded by the Council of the Royal College of Surgeons of England to Mr. William Watson Cheyne, M.B.Ed., and F.R.C.S.Eng., of Old Cavendish Street, for his essay on 'The History, Principles, Practice, and Results of Antiseptic Surgery'. Mr. Cheyne was previously well-known by a valuable contribution on the same subject in the *Transactions of the Pathological Society* on the 'Relation of Organisms to Antiseptic Dressings'.

FEMALE MEDICAL PRACTITIONERS.—In thirty years the Woman's Medical College of Philadephia has sent forth 276 graduates. Dr. Rachel Bodley, the Dean, has made inquiries with reference to the 244 female physicians still living; of these, 181 answered the questions. Thirty had altogether given up the practice of medicine, 98 had devoted themselves to the treatment of the diseases of women, 59 were engaged as physicians in some asylum or hospital. Three of the number stated that their profession had prevented their marriage, while 43 declared that the study and practice of medicine had had a favourable influence on their domestic relations as wives and mothers.

IMPAIRMENT OF VISION FROM THE ABUSE OF ALCOHOL AND TOBACCO.—Dr. D. Webster (in the *New York Med. Record*, Dec. 11, 1880) gives a record of twenty cases, in each of which it seemed clear that alcohol or tobacco, or both, were the direct cause of the impaired vision. From a study of these cases, he concludes: 1. Amblyopia from poisoning by alcohol alone, or by alcohol and tobacco combined, is not uncommon. 2. Amblyopia from poisoning by alcohol alone does occur, but in this country somewhat rarely. 3. Cases of amblyopia from abuse of tobacco and alcohol will usually improve, perhaps to a limited extent, on a simple abstinence from the poisons causing the disease. 4. They will improve much more rapidly under treatment by hypodermic injections of strychnia, this drug having a specific stimulating influence upon the nervous portion of the visual apparatus.

THE DEATH SMELL.—Dr. A. B. Isham, Professor of Materia Medica and Therapeutics in the Cincinnati College of Medicine and Surgery, describes, in the *American Journal of the Medical Sciences* for April 1881, a peculiar *ante mortem* odour encountered in many cases at a variable period before the fatal result; in one case, he noticed it thirty-three hours before death. The smell is analogous to musk, but is rather more pungent and less diffusible. He is inclined to attribute the phenomenon to the liberation of ammonia, and of the peculiar volatile oil (fatty acid) which gives the blood its odour; this liberation being caused by the diminishing vitality of the blood.

GLUTEN-BREAD.—Prof. Xav. Landerer directs how to prepare gluten-bread (*Pharm. Zeit.*) by inclosing wheat-flour in a linen sack, and kneading this under water until no more starch can be washed out; that is, until the water remains clear. The gluten remaining in the sack forms the basis of the bread; it is mixed with yeast or sour dough, also with butter, eggs, and sometimes with chopped meat, sprinkled over with aniseed or fennel, and then baked. At the same time, a generous Greek red wine is recommended to be used as a stimulating drink.

THE METRIC SYSTEM.—The following rules for ready metric writing will be found useful. For fluid mixtures: write for the same number of grammes of each article as the number of grains or minims in each single dose of the article. Add sufficient vehicle to make a sixty-gramme mixture. A teaspoonful will contain the proper dose. For pills or powders: write for the same number of grammes of each article as the number of grains in each single dose of the article. Divide into fifteen pills or powders. Each will contain the proper dose.

A POLYGLOT POEM.—Mr. Greenish, the well-known chemist and druggist and past president of the Pharmaceutical Society, has been chosen to preside over the International Pharmaceutical Congress which is to meet in London in August next. The *Chemist and Druggist* publishes the following *jeu d'esprit* as his probable inaugural address to the foreign visitors.

Mes chers Messieurs et Gentlemen, Meine Herren und Signori,
Permettez moi, ich bitte, de vous faire voir my glory.
Je suis le Président, Vorsitzer, Ganger, Boss, Hauptfigur,
Of English pharmacy to-day, le doyen plein de vigueur.
Ayez la bonté donc, Messieurs, de vous donner la peine
De vous asseoir et de vous taire pendant que je explain.
Ich bin, Sie wissen es recht wohl, in Deutschland oft gewesen,
La France m'est parfaitement connue, its shores I love to gaze on.
I know each hochgelehrte Herr from Mendeljeef to Roscoe,
Twixt County Cork and St. Sophia, from Guadeloupe to Moscow.
Die Pharmacie Verhältnisse der aller Welt to me
Ne sont que telles que sont à vous votre ancien A B C.
So cherchez-vous par tout le monde and tell me if you know
A boss who'd better engineer this polyglottic show.

Now, liebe Freunde, guess we're going to have a bully time
With pharmaceutic eloquence restored from Babel's prime.
For instance, first we may expect to be enchanted by
Sein hochberühmte Würdigkeit, Professor Kopf von Blei.
Next with the music of his tones thrilling us through and through,
Suivra l'oraison magnifique de Monsieur Savoirtout.
Then those who yet of learned talk may not have had enough
Will have the chance of listening to the Dr. Nehrlievoff.
But the crowning intellectual treat we may be sure will be a
Renewed discussion on the œcumenic pharmacopœia;
For twenty years we've pegged away with well-assumed devotion
At that revered, though oft-reviled, but venerable, notion.
And we're not partic'ly likely to let such a nest-egg go,
For it's just the thing which keeps alive our polyglottic show.

Ho, white and black pharmaciens! Ho, miscellaneous crew!
Ho, Catholic and Protestant, Mahommedan and Jew!
Ho, chemical professors! Ho, pharmaceutic Kings!
Come gather all of you beneath my cosmopólite wings.
Come with your broken English, and with your Baedeker,
And lovingly discuss with us about materia medica.
Let Russia's grim professor grasp the hand of fiery Turk,
And Teuton lamb with Gallic wolf harmoniously work.
And though the world may rave and rage and tear each other's hair,
Let Shem and Ham and Japhet meet in peace at Bloomsbury Square.
And when we've finished for a time our most momentous labours,
And start to toast and glorify each man his noble neighbours,
Be sure to let the eloquence and champagne freely flow
To Thomas Greenish, President of this polyglottic show!

The London
Medical Record.

BETZ ON THE MICROSCOPIC STRUCTURE OF THE CORTEX CEREBRI.

PROFESSOR BETZ (*Centralblatt für die Med. Wiss.*, 1881, Nos. 11, 12, and 13) has endeavoured, by his histological researches, to verify the statements of Hitzig and Ferrier respecting the localisation of functions in the cortex cerebri. In 1874 he pointed out that the 'motor zone' contained large cells, to which the name of giant-cells was given, though they have nothing to do with the giant-cells which play so large a part in the modern descriptions of new growths. He says, the cortex cerebri, as is well known, is composed of five layers, as follow :— 1, a layer of neuroglia, containing small granular nuclei; 2, in addition to the preceding, there are pyramidal cells of medium size, with the apices directed towards the periphery, and their bases towards the central parts; 3, very large pyramidal cells, which are, however, fewer and scattered; 4, small round or elliptical cells, constituting the 'nuclear layer'; 5, special fusiform cells.

This is the typical arrangement, but the various regions show differences. Thus, Meynert has shown that, in the neighbourhood of the calcarine fissure, the third layer is absent, and the structure in this region consists of two nuclear layers separated by a layer of nerve-fibres, on which lie by pairs large pyramidal cells. The hippocampus also is principally composed of the elements of the third layer. The claustrum consists of the elements of the fifth layer; the ascending frontal, and the paracentral lobe contain 'giant-cells' grouped in nests.

He has examined 5,000 preparations from brains of all ages, and has come to recognise, in addition to the above, certain other regional peculiarities.

The *ascending frontal convolution* in its upper two-thirds, presents the following characters. At first, just above the fifth layer, there are large cells, single or united by pairs, and at great intervals one from another; higher up, these cells are grouped in threes and fours, and the intervals are less. Higher still, the groups are formed by a large number of cells, not less than four, often six or seven. In the third layer, they present an uninterrupted series. In the second, they are as scattered as in the fourth. Near the paracentral lobe, this series is again interrupted so as to form groups or nests. Nearer the lobe the cells become larger, until they pass into the condition of the true giant-cells of that region. These latter are never found in the ascending parietal.

The *convolution of the corpus callosum* is composed at its origin, beneath the anterior part of the lamina terminalis, almost exclusively of two layers, the superior and the fifth; while the cells of the latter, instead of being parallel to the base of the convolution, are perpendicular, like the cells of the third layer elsewhere, and they are two or three times larger than the ordinary fusiform cells of the third layer. In the middle of this convolution, the 'nuclear layer' (fourth), and the layer of pyramidal cells, reappear. In the posterior third, three new layers occur. The first, lowest, is composed of longitudinal fibres, forming an arch over the upper surface of the corpus callosum. The second layer, grey, is formed of small round cells; the third, equally grey, contains pyramidal cells, and also large fusiform cells. These three layers become more and more important towards the extremity of this convolution, but never involve more than its inferior and internal portions. Where the convolution of the corpus callosum passes into the hippocampus, the layer of large cells suddenly increases, and goes to form the internal cellular layer of the hippocampus. The nuclear layer, above described, becomes the well known nuclear layer of the hippocampus; and the layer of white fibres adjacent to the corpus callosum passes to form the reticular white matter of the hippocampus.

The *extremity of the hippocampus*, and the terminal part of the temporal lobe, present the peculiarity that the pyramidal cells of the third layer are found immediately beneath the first, and are arranged in groups like balls of thread, whence they have been named by Betz *cortical glomeruli*.

The *third frontal convolution* is separable into three parts, the most posterior extending from the ascending frontal convolution to the perpendicular branch of the fissure of Sylvius; the middle portion extends from this limit to the beginning of the orbital portion of the convolution: and the third, situated on the under surface of the brain, extends from the extremity of the convolution to the island of Reil. The first portion contains in the third layer pyramidal cells of larger size than are found elsewhere in the frontal lobe; and in brains of persons of advanced age, there may be giant cells of small size, which pass into the extremity of the ascending frontal. The second portion contains, in the second and third layers, long, slender, pyramidal cells grouped together, and with their processes directed obliquely. The third portion contains chiefly cells on the type of the fifth layer, and of the size of those of the claustrum, arranged, generally, perpendicularly to the transverse section of the cortex; sometimes there are some cells of the third layer, but they are very small.

The *island of Reil* contains numerous small cells, like those of the fifth layer.

The *lingual lobe* possesses eight layers from without inwards: 1, the layer of neuroglia; 2, very small pyramidal cells; 3, nuclei; 4, horizontal fibres; 5, nuclei; 6, horizontal fibres; 7, triangular pyramidal cells; 8, fusiform cells.

The *fusiform lobule* has an analogous structure; but, as it approaches the occipital lobe, the seventh layer disappears, and at the end of the descending gyrus all the layers unite to form a homogeneous mass of nucleated cells, and a little row of fusiform cells.

The external portion of the *occipital lobe* has the second and third layers of pyramidal cells of the ordinary type, and here and there there are cells of large size.

The *angular gyrus* has an analogous structure, but the cells of the third layer are much larger than in the occipital lobe.

The *ascending parietal convolution*, and *superior parietal* and *inferior parietal lobules*, have the ordinary typical structure.

The three *temporal convolutions* are distinguished by the thickness of the fifth layer, and by the presence of small cells in the third.

The *parieto-temporal* and *transverse temporal* convolutions are of the ordinary type.

The *quadrate lobe* has near its upper border, in the third layer and above the fifth, two rows of pyramidal cells.

The *frontal convolutions*, excepting the lowest, already described, have a very thick third layer of large pyramidal cells, which almost obliterates the fourth layer.

The *straight gyrus* is very like the convolution of the corpus callosum.

In the *female*, the third layers in the frontal and parietal lobes are thinner, and the pyramidal cells fewer; while, in the occipital lobes, the same layer presents larger and more numerous cells.

In the *embryo*, at seven months, the cortex is composed of only two layers, the first and fourth, and pyramidal cells may be seen only in the hippocampus.

In the *new-born child* the cortex is much the same, but the hippocampus has all its elements as visible as in the adult, and in the paracentral lobe there are some giant-cells, which may be distinguished by their pyramidal form and three prolongations. At the age of *six weeks*, the pyramidal cells of the third layer may be observed in several convolutions.

In *children of eleven to twelve years*, the giant-cells have still few prolongations, the apical prolongation is still short and pale, and no basal prolongation has been observed.

In the case of an *idiot* (Motté), the frontal lobe was composed of irregular, slender pyramidal cells, in which it was impossible to distinguish the five layers. The giant-cells of the ascending parietal and paracentral regions were narrow, oblique, and furnished with few prolongations, the basal prolongation being absent. The parietal and occipital lobes had the nuclear layer well developed, while the pyramidal layer was small, thin, and contained chiefly the small pyramidal cells of the second layer. The *hippocampus* had its white substance very well developed; its characteristic cellular layer was small, as was also the nuclear layer.

With respect to the origin of the olfactory nerve, the olfactory tubercle contains a first layer of small pyramidal cells, few in number; a thick layer of nuclei, and large cells in the fifth layer, like those in the convolution of the corpus callosum. There is, in the inferior portion of the tubercle, a bundle of white fibres, coming from the corpus callosum; and the same region contains a gray layer, consisting of oval ganglionic cells, of large size, and furnished with processes, recalling the cells of the cornua of the spinal cord. In the brain of Motté, this grey layer was much better developed than usual. This grey layer may be called the central ganglion of the olfactory tubercle.

These facts afford an anatomical confirmation to the researches of Ferrier. Convolutions are organs separated by sulci, or fissures, in which lie the blood-vessels supplying them. The larger the convolutions, the greater is the development of the particular organ; and the more numerous the convolutions, the greater is the specialisation of function.

ROBERT SAUNDBY, M.D.

KÖLLIKER ON THE STRUCTURE OF THE MAMMA.

THIS author gives (*Verhandl. der Phys. Med. Gesellsch. in Würzburg*, Band xiv, Heft 3 and 4) a detailed description of the minute anatomy of the male and female mamma at various ages. In the new-born infant, sex makes very little difference in the structure. At this period there are no terminal gland-vesicles, the ducts are lined with a single layer of cylinder epithelium or with a few layers of pavement cells, and end in club-like extremities. The ducts he finds in all cases irregularly dilated, the dilatations being filled with shed epithelial cells and a white granular material—forming the so-called 'witch-milk', which he regards as normal. During the first year, the most noticeable point is the great dilatation of the ducts, giving the organ a cavernous appearance. The ducts are lined, according to the amount of dilatation, either with flattened epithelium or with several layers of round cells; and those which reach into the depth of the organ have now several club-like terminations. Strings of cells, afterwards developing into fat-cells, are also seen in the deeper parts of the gland. The above-mentioned dilatations gradually diminish during the latter half of the first year, till the lumen is normal, but in some cases swelling of the gland goes on, and a true mastitis results, from which, in all probability, follow those cases of imperfect development of the breast in otherwise well-developed women. From the age of one to ten little change takes place beyond the development of fat around the organ and the increase of the septa of connective tissue.

From ten to twenty, the male mamma changes but little, although the terminal gland-vesicles may develop here and there on one or both sides. From twenty to thirty, the male mamma reaches its highest development. The ducts divide dichotomously at their extremities, and send off cellular processes which develop into vesicles. The cutaneous papillæ, the smooth muscular fibre, and the sudoriparous glands, are also much developed. From thirty to fifty, regressive changes occur, gradual disappearance of the terminal vesicles from fatty degeneration of the epithelium with contraction of their lumen and a matting of the connective tissue. The ducts also become tortuous and varicose, and, in later life, there is a great enlargement of the sebaceous glands.

In the virgin mamma, there is no division into lobes. The great part of the gland lies underneath the areola and towards the lower segment of the organ. The cutaneous papillæ are not much developed, and the interstitial tissue is almost tendinous in structure. The gland-vesicles are few in number, even at the age of twenty. They are formed by cellular offshoots from the ducts, at first solid, but gradually acquiring a lumen. In pregnancy, this process goes on rapidly and in large extent. Circular and longitudinal smooth muscular fibres are present in considerable quantity; both classes of fibres being tolerably uniform on the nipple, while the circular fibres seem to preponderate in the areola. During menstruation, although the organ sometimes becomes harder and more sensitive, the author discovered no change. Probably the symptoms are caused by a temporary hyperæmia, producing more rapid growth. During pregnancy and lactation, the papillæ on the nipple are broad but not high, those on the areola are long and pointed. The rete Malpighii contains a thick layer of yellowish-brown pigment. From eighteen to twenty-two ducts converge to the depression of the nipple to open between the cutaneous papillæ, each of these ducts being made up of from four to fourteen branches. The connective tissue of the gland is loose and relatively less in quantity. The terminal vesicles are now well developed, forming a well-marked racemose gland. They are best developed in the deeper parts of the gland, the superficial part consisting mainly of excretory ducts and connective tissue. Between the papillæ of the areolar space are found the pro-

minences of Montgomery's glands, specially developed sebaceous glands, about a dozen in number. Regressive changes follow pregnancy and lactation, general relaxation of the breast, the nipple and areola retaining their size, although the pigmentation slightly lessens in degree. The vesicles also lessen in size. The lobules become separated by more connective tissue. Later in life, the whole glandular tissue disappears except the excretory ducts; the fat also atrophies, and we have the pendent breasts of age.

JAMES ANDERSON, M.D.

WEIL ON THE THEORY OF MITRAL INSUFFICENCY.

IN most handbooks of medicine, in the chapter devoted to heart-affections, we find the theory of 'compensation in valvular disease' based upon the law of retrodilatation and consecutive hypertrophy of the section of the heart situated above the lesion. According to this, mitral insufficiency should be followed by dilatation and hypertrophy of the left auricle, and shortly of the right ventricle. The fact that excentric hypertrophy of the left ventricle is found in cases of simple mitral insufficiency has been frequently observed, but, nevertheless, scarcely rightly estimated.

Weil (*Berl. Klin. Woch.*, No. 7) agrees with Waldenburg in thinking excentric hypertrophy of the left ventricle a necessary condition for efficient compensation for insufficiency of the mitral valve, dilatation and hypertrophy of the left auricle and right ventricle being of themselves insufficient to compensate for the lesion. Weil's argument is clear and simple. Mitral insufficiency is only compensated for, when, in spite of regurgitation of a portion of the contents of the ventricle into the auricle, the same quantity of blood enters the general circulation with each systole, as is the case with competent valves. Hence the ventricle must be capable of containing as much more blood as is regurgitated at each systole; as a consequence it must be dilated, and, since the work is increased, it usually becomes hypertrophied. The clinical diagnosis of excentric hypertrophy depends on the force of the impulse and on percussion. Exaggeration of the sounds over the aortic valves may be absent, since that is merely indicative of increased tension in the aortic system. A further postulate of compensation is dilatation and hypertrophy of the left auricle, and, *finally*, *hypertrophy of the right ventricle;* the latter may, however, be developed without accompanying dilatation. In proof of this, Weil has continually found excentric hypertrophy of the left auricle, while he very commonly failed to discover any enlargement of the right heart. Exaggeration of the sounds over the pulmonary valves always existed, a sign of increased tension in the pulmonary circulation. The systolic murmur at the apex alone proves little. The existence of excentric hypertrophy of the left ventricle with a normal pulse, allows the presumption of insufficiency of the mitral valve even before auscultation.

If with mitral insufficiency stenosis be associated, the hypertrophy may retrogade and altogether disappear, for the stenosis diminishes the amount of blood entering during diastole. The knowledge of this circumstance is the more important for the diagnosis of the combination of stenosis and insufficiency, since, in spite of serious stenosis, no presystolic murmur may exist.

If, however, on the *post mortem* table excentric hypertrophy of the left ventricle be seen associated with serious stenosis, it may in these cases be assumed that the hypertrophy is of older date; in fact, dates from the time when the insufficiency of the valves prevailed.

G. H. MAKINS.

WAGNER ON AMYLOID DEGENERATION OF THE KIDNEY.

IN the twenty-eighth volume of the *Deutsch Archives für Klinische Medicin*, Wagner publishes an interesting paper upon amyloid degeneration of the kidney. In regard to etiology, out of 265 cases, Wagner found that 136 accompanied phthisis; 56 occurred along with disease of bone (non-syphilitic); 36 accompanied syphilis; 30 were found in connection with certain rarer diseases; and with regard to 7, no probable mode of origin was apparent. The more interesting portion of this paper is that in which the author deals with the symptomatology of waxy kidney. In comparatively few of these cases were the symptoms observed during life so closely as to be of service: only twenty-four appear to have been available, and of these the majority were only under observation for very limited periods; the longest apparently only during a few months. Studying these cases in detail, Wagner separates them into four groups: 1. Slight amyloid degeneration of the cortical or the medullary substance, or of both, without alteration of the epithelium or of the stroma; this variety was hardly observed clinically; 2. Greater or less waxy degeneration of the cortical or medullary portion, with a varying amount of fatty degeneration of the epithelium, without changes in the stroma; 3. The same waxy degeneration, along with fresh interstitial changes; 4. Waxy-contracted kidney. In regard to this last-named condition, Wagner adopts the view held by Cohnheim, Bartels, Rokitansky, etc., viz., that the waxy change occurs in the kidney after it has become cirrhotic. With regard to the condition of the urine in these cases, Wagner found that it was almost invariably diminished in quantity, and this without diarrhœa, perspiration, or increasing œdema being present. In a few cases the urine was of normal quantity, and only in two does it appear to have exceeded that amount. The quantity of albumen was, in 13 cases of the 15 belonging to the first two groups, in medium or in great amount ($\frac{1}{4}$, $\frac{1}{2}$, $\frac{1}{3}$, or even $\frac{1}{1}$ volume); but in two cases it was at the commencement small in quantity, afterwards increasing. The tube-casts varied much in number from one day to another. They were for the most part of medium diameter, and usually hyaline, sometimes fatty. Wagner believes that œdema is more rarely met with in such cases than is generally supposed. In conclusion, he observes that, while waxy kidney may often be diagnosed with care, there are many cases in which such a diagnosis cannot be arrived at with any certainty.

J. GRAHAM BROWN, M.D.

CHARCOT ON THE PATHOGENESIS OF ALBUMINURIA.

PROFESSOR CHARCOT (*Le Progrès Médical*, 1881, No. 19) in a recent lecture, proceeds to explain how the theoretical doctrine of the dependence of albuminuria on retardation of the blood-current (see

LONDON MEDICAL RECORD, April 15th, 1881, p. 133) is applicable to the clinical facts in our possession.

The physiological experiments of Gull and Stokvis, of raising the arterial pressure in the kidneys by ligaturing arteries or compressing the abdominal aorta, showed that high pressure alone would not determine albuminuria. This may seem at variance with the clinical fact of the presence of albuminuria in interstitial nephritis with hypertrophied heart; but M. Charcot explains this by the fact that some of the glomeruli are more or less profoundly altered, in consequence of which both the pressure and the rapidity of the blood-current are diminished. [It is obvious that, if the changes in the glomeruli are to be called in question at all, M. Charcot is departing from the mechanical theory he has propounded.—*Rep.*] On the other hand, Overbeck's experiment of reducing the blood-pressure by introducing a sound into the right ventricle, carrying a small bladder which can be inflated at will, is always followed by albuminuria. Here the condition of things is diminution of pressure and rapidity. Such a condition is met with clinically in valvular disease of the heart, chronic disease of the myocardium, and some pulmonary diseases. In cases of mitral insufficiency, Rosenstein observed that the albumen disappeared as the urine increased, and returned as it fell in quantity. The cardiac kidney is not the cause of the albuminuria of heart-disease, but the consequence of the state of things which causes the albuminuria. The albuminuria of Asiatic cholera and other acute diseases is also explained by this theory. The anatomical theory which refers albuminuria to a lesion of the renal epithelium, supported of late by Lécorché, is opposed by the experiments which show that albumen is excreted by the glomeruli, and that its presence in the convoluted tubules is a pathological occurrence, and by the fact that the epithelium may be profoundly altered or destroyed, as in granular kidney or in phosphorus poisoning, without albuminuria.

ROBERT SAUNDBY, M.D.

LESSER ON THE CAUSES OF DEATH FROM BURNS.

LESSER (Virchow's *Archiv*, Band lxxix) first of all combats the deductions drawn by Sonnenburg from his experiments (*Deutsche Zeitsch. für Chir.*, Band ix), and, supported by his own experiments, concludes that irritation of the terminations of the cutaneous nerves is of no special importance in death rapidly following burns. He then passes on to demonstrate the changes which take place in the blood circulating in the skin in burns of the surface of the body; and further, the changes induced in the body by these alterations. He has come to the conclusion that (apparently without essential destruction of the red corpuscles) the red colouring matter of the blood becomes diffused in the plasma. He proves this by transfusing defibrinated blood heated to above 70 deg. Cent. (158 deg. Fahr.), as well as that of previously burned animals. The diffused colouring matter is chiefly excreted by the kidneys in the urine, as is evident from examination of the urine and kidneys. The excretion begins about an hour after the burning, and may continue as long as two days. On *post mortem* examination, extravasations of blood were discovered in various organs, and in the kidneys large collections of blood-colouring matter, especially within the convoluted tubes, pigment-granules between the epithelium, hyaline cylinders, etc. On the ground of previous, as well as some more recent, experiments, Lesser discusses the possible causes of death; and, after eliminating numerous possibilities, advances the theory that a relatively too large number of red discs (through separation of the blood-colouring matter and consecutive damage) become fully developed, so that a sufficient quantity of blood for the completion of the respiratory processes necessary for the prolongation of life is no longer furnished, and, as a consequence, paralysis of the respiratory and circulatory centres ensues.

Lesser thinks that the injurious effects of burns on the general system depend neither on the thickness and capacity for resistance of the skin, the extent of the burned region, nor on the intensity or length of the operation; but that for seriousness of the burns it is necessary that the circulation should be kept up in the burned parts, and that new masses of blood should constantly stream through the heated skin and muscles; the longer this is continued, so much the greater being the number of red corpuscles robbed of their vitality. At a later period, death may result from septicæmia.

Lesser speaks strongly in favour of the method of treatment already recommended by Ponfick for severe burns; viz., transfusion, in addition to local antiseptic treatment, and is of opinion that transfusion may still be useful at a later period, if the patient do not recover his strength.

G. H. MAKINS.

PAYNE AND OTHERS ON THE PHYSIOLOGICAL ACTION AND THERAPEUTIC USES OF THE COMMON MISTLETOE.

THE mistletoe was held in the highest estimation by the Druids; regarding it as the most sacred thing in nature, they showed their reverence for it by giving it the place of prominence in all their mystic rites, and no profane hand touched the sacred plant, which was severed from the bough on which it grew only by the golden knife held in the consecrated hands of the priest, the ceremony being accompanied by sacrifice and many holy observances. In modern times, it has been associated with the very pleasant custom, which allows young men the sweet privilege of kissing the maiden who may be caught standing beneath the mistletoe bough at Christmas tide. Of late, however, it has been robbed of many of its pleasant associations, and has fallen into the hands of the physiologists and therapeutists, who have extracted its active principle, and injected it into frogs, and have even suggested that it might be used as a vermifuge.

Dr. Lee Payne, jun., has recently published a paper (*North Carolina Med. Jour.*, May 1881) on the physiological action of mistletoe, which deserves at least a passing notice. In England we have only one indigenous species, the *viscum album*, but in the States the *viscum flavescens* grows abundantly, and is parasitic on almost every elm, oak, black-gum, and persimmon tree. The leaves of our common mistletoe are lanceolate or spatulate, obtuse, and entire, whilst those of viscum flavescens are obovate, or oval and fleshy. Mistletoe has been analysed by Gaspard, Funcke, Winckler, Macaire, and Reinsch, and has been found to contain mucilage, sugar, an odorous principle, a fixed oil, traces of tannin, resin,

and various salts. Its active principle is *viscin*, also known as birdlime, or more correctly birdglue, from the German *Vogelleim*. It is insoluble in water, alcohol, and fixed oils, but dissolves in ether and oil of turpentine. It is said by some that viscin is in reality a product of fermentation.

Mistletoe has long been used as a remedy for epilepsy, chorea, and neuralgia; but, according to Stillé and Maisch, its action is uncertain, and its virtues are doubtful. In 1851, Dr. Turnipseed, of South Carolina, called attention to its ecbolic action, but his observations have long been forgotten. In 1878, Dr. Long published a paper in the *Louisville Medical News*, in which he alleged that it is superior to ergot, on the ground that it acts with more promptness and certainty; and that, instead of producing a continuous or tonic contraction of the uterus, it induces an intermittent action, analogous to that of natural labour. A few cases of poisoning by the berries have been recorded, from which it would appear that it causes vomiting and great thirst, with diarrhœa, tenesmus, and blood-stained motions.

Dr. Lee Payne, as the result of his investigations, is satisfied that mistletoe is a valuable addition to our list of remedies. He employs a liquid extract of the whole plant, made according to the directions of the *U. S. Pharmacopœia* for the preparation of fluid extracts, one part of the extract representing two of the plant. His observations were conducted on frogs and on warm-blooded animals. In addition to being an irritant of the gastro-intestinal mucous membrane, he finds that in frogs it retards the heart's action; increasing the duration of the diastole, and the strength of the systole. In warm-blooded animals, it not only increases the strength of the heart's beat, but also its frequency. It lessens reflex action, and is said to paralyse the motor and sensory nerves. Given internally to dogs, it dilates the pupil. The experiments are given in detail, but they are too few and too imperfect to be of much value. Dr. Payne has given the liquid extract with benefit in five cases of uterine inertia, the dose being from half a drachm to a drachm. He also employs a decoction—two ounces to the pint—and of this the dose is two tablespoonfuls every six hours. It has also been used in hæmoptysis, with, it is said, good results.

William Murrell, M.D.

MANN ON THE THERAPEUTICS OF INSANITY.

Dr. Edward C. Mann, of New York, in an article published in the *New York Med. Jour.* for June 1881, states that, respecting the therapeutics of diseases of the mind, he regards it as good practice to give five to ten grains of calomel to begin treatment, followed by salines, which prepare the system for whatever after-treatment is indicated. For an overworked business man, on the verge of insanity, whose whole system is probably disordered, in whom anxiety has caused loss of appetite and inability to sleep, and in whom the integrity of the nervous system has been gradually deteriorating for some time; as well as for patients whose conduct and conversation are beginning to attract attention—such an initial treatment, followed by the administration of thirty grains of bromide of sodium and thirty drops of tincture of cannabis indica thrice daily, with warm baths at bed-time, cold affusions to the head, and galvanisation of the brain (which latter controls the cerebral congestion), will be followed by prompt and gratifying recoveries. Many such patients are far better in their own homes, treated by this plan, than when carried away from home to an asylum.

Dr. Mann does not at all underrate the good work done at asylums, but contends that he can cure a patient in his own home, in the beginning of insanity, or by taking him into his own family, in a much shorter time than by the use of precisely the same means when the patient was subjected to the depressing idea that he was in an asylum, where there were patients, perhaps, in the same ward, who had been and would be there for years. In acute mania he is inclined to think that either opium or morphia increases excitement, and that hyoscyamin is a great deal better. Where there is exhaustive mania, with high excitement and cerebral anæmia, wine or brandy he has always found to be the best calmative and soporific. He always gives it with a carminative, so that the patient may not know what he or she is taking. Food must be given regularly and systematically, to support strength and prevent exhaustion. A pulse of 150 will come down to 80 under this stimulative treatment in exhaustive mania, and a quiet, refreshing sleep and a good recovery will result. He thinks chloral-hydrate should be used very carefully, and never gives more than fifteen grains at a dose, generally combining it with sodium bromide and hyoscyamus, repeating at intervals of two hours until the desired effect is produced. Nurses have to be very carefully watched, lest, in caring for patients suffering from melancholia, they neglect to prevent the refusal of such food as is really needed for the support of the patient. The author does not believe in slops for food in mental disease, but wants his patients to have positive food—milk, eggs, beefsteak, lamb, and well-cooked vegetables and fruits. *Rest* and *nourishment* are his two main reliances, and if we add to these two a third, namely, *sleep*, we can, he thinks, by judicious treatment cure any curable case of insanity. There are cases in which the camisole, a soft canvas jacket, which is all the restraint ever necessary in any case, is temporarily needed; but this should never be entrusted to the option of a nurse.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. Caussidou.—On the Treatment of Typhoid Fever by Salicylate of Soda. (*Revue de Therap.*, May 1881.)
2. Iljinsky.—On the Merits of Hospital Kwass. (*Ibid.*, Nos. 6 and 7.)
3. Rozzolo.—Doliarin as a Remedy for Ankylostomum Dubini.
4. Murrell, W.—On Nitre-Paper in Asthma (*Brit. Med. Jour.*, June 1881, p. 918.)
5. Charteris, M.—On the Constitutional Action of Chrysophanic Acid. (*Lancet*, April 1881, p. 651.)
6. Carter, William.—On Sarsaparilla in Syphilitic Cachexia. (*Practitioner*, May 1881, p. 357.)
7. Grattan.—Pilocarpin as an Antidote to Belladonna (*Lancet*, June 1880, p. 251.)
8. Campbell, W. Macfie.—On Belladonna in the Sickness of Pregnancy.
9. Coghill, Dr. J. G. Sinclair.—On Antiseptic Inhalations in Pulmonary Affections. (*Brit. Med. Jour.*, May 1881, p. 841.)
10. Ringer, Sidney.—On the Influence of Ammonia in Chloroform Poisoning. (*Practitioner*, June 1881, p. 437.)

11. PAGGI, ADOLFO.—On the Treatment of Chloroform Poisoning by Application of Heat to the Præcordial Region. (*Lancet*, June 1881, p. 1,015.)

12. HUDSON, JAMES.—On Physostigma as an Antidote to Belladonna. (*Brit. Med. Jour.*, June 1881, p. 918.)

13. KINGZETT, C. T.—On Oxidised Oil of Turpentine as a New Antiseptic. (*Lancet*, June 1881, p. 971.)

14. NETHERCLIFT, W. H.—On Hamamelis Virginica in Hæmorrhoids and Intractable Ulcers.

15. MICKLE, W. J.—On Morphia in Melancholia. (*Practitioner*, June 1881, p. 430.)

16. DOLAN, THOMAS M., and WOOD.—Experimental Inquiry into Human Milk and the Effects of Drugs during Lactation in either Nurse or Nursling. (*Practitioner*, Feb. *et seq.*, 1881.)

17. Iodised Cod-Liver Oil. (*Archives Méd. Belges*, Jan. 1881.)

18. FERNET.—A Method of Introducing Food and Medicine by the Nostrils. (*Revue de Thérap.*)

19. LAWRENCE.—Iodide of Ethyl in Asthma. (*New York Med. Jour.*, June 1881.)

20. VIDAL'S Lotion for Diphtheria. (*La Presse Méd.*, May 1881.)

21. EISNER'S Improved Diachylon Ointment. (*Philadelphia Times*, May 7, 1881.)

22. ROLLINS.—On Mouth-Washes in Illness. (*Boston Med. and Surg. Jour.*, April 1881.)

23. DA COSTA.—The Hypodermic use of Iron in Chlorosis. (*New York Med. Gaz.*)

24. DABNEY, J. S.—On the Use of Apocynum Cannabinum in Anasarca. (*New Orleans Med. and Surg. Jour.*; and *Chicago Med. Review.*)

25. SAINT-PHILIPPE.—On the Neuralgic Character of Certain Forms of Angina, and their Treatment by Sulphate of Quinine. (*Jour. de Méd. de Bordeaux*, March 20, 1881, p. 371.)

26. BOSSE.—On Turpentine in Diphtheria. (*Berl. Klin. Woch.*, 1881, No. 9.)

27. LASKIEWICZ.—On the Treatment of Epilepsy. (*Przeglad lekarsh.*, Nos. 4 and 6, 1881; *Centralblatt für Nerwenheilkunde*, 1881, No. 6.)

28. WILLIAMS, H. D.—Wood Betony in Atonic Dyspepsia. (*Therap. Gaz.*, June 1881.)

29. HARPER, H. WINSTON.—On Rhus Aromatica or the Fragrant Sumach. (*The Canadian Pharm. Jour.*, June 1881, p. 342.)

30. MILLER, CHARLES H.—Decoction of Flax-Seed in the Treatment of Phthisis. (*Therap. Gaz.*, June 1881.)

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1. *Caussidou on the Treatment of Typhoid Fever by Salicylate of Soda.*—M. Caussidou made a communication to the meeting of the French Association for the Advancement of Science at the Congress of Algiers, which was based on thirty-two cases of typhoid fever treated by salicylate of soda, and in which the rise of the temperature and the influence of this drug on the febrile process had been registered with the greatest care, as attested by numerous tracings shown by the writer. M. Caussidou arrived at the conclusion, in opposition to the facts observed in several wards of the Paris hospitals, that salicylated medication gives larger, more certain, and more permanent effects than refrigeration. M. Caussidou has even been in doubt if, by administering salicylate of soda from the outset of typhoid fever, it would not be possible to limit the duration of the disease to the first week (?), and if, at least, it would not be possible to obtain a number of cases belonging to the abortive form. Nevertheless, M. Caussidou does not conceal the dangers of salicylate medication. Like other observers, he has noted dyspnœa, precordial trouble, and exhaustion in patients where the salicylate of soda have brought on a too sudden apyrexia. To avoid these objectionable results, he proposes to administer salicylate of soda in fractional doses of one gramme given every two hours, and to stop so soon as the temperature falls below 38 Cent. (100.4 Fahr.) In a complicated case of erysipelas, the salicylic medication was powerless to produce a febrile recrudescence brought on by this complication. M. Hérard declared that he had nothing but commendation for the use of antiseptics, such as carbolic and salicylic acids, in the treatment of febrile diseases.

2. *Iljinsky on the Merits of Hospital Kwass.*—This, an old popular Russian drink, is included in the obligatory diet of the military hospitals in that country, being given out (in full diet) in allowances nearly one litre. Iljinsky, at the request of his senior medical officer, undertook the task of overlooking the preparation of the beverage, and daily analysing it as to its contents of acids, alcohol, and extractive matter. For the preparation of 5,496.161 litres (80 eimers), the following ingredients are made use of:—Barley malt, 104.950 litres (4 tschetwerik); rye malt, 1,638.4 to 4,095.10 grammes (4 to 10 Russian pounds); rye meal, 24,570.60 grammes (60 Russian pounds); yeast, nearly ¾ of a litre (¾ of a 'krug'); peppermint, 2,047.55 grammes (5 Russian pounds); wheat meal, 819.2 grammes (2 Russian pounds). When brewed under observation, the specific gravity was 1012 to 1021, although formerly it was only 1004 to 1006, and Dr. Georgievski gives 1006 to 1007 as the average specific gravity of kwass. Hence it appears that in general 70 per cent. of the officially determined quantities of ingredients are, for economical reasons, not used. The analysis showed it to contain a series of valuable nutritive constituents, thus: lactic acid (according to Preyer a nerve-sedative), acetic acid (a thirst-quencher), and, further, alcohol and carbonic acid, both of which hinder tissue change, and thus, to a certain extent, lower the temperature. The day's hospital ration of kwass contains: albuminates, 5.5 grammes; carbon hydrates, 33.0 grammes. The merits of the drink may be thus summed up: it excites appetite, acts both on the nervous system and on tissue-change, and is to a certain extent nourishing. When it is rapidly cooled after boiling, as is done with beer, a beverage resembling stout, but of more nutritive value, is obtained. G. H. MAKINS.

3. *Rozzolo on Doliarin as a Remedy for Ankylostomum Dubini.*—Doliarin is a crystalline substance extracted from a plant native to Brazil, the *Urostigma doliarium* or *Ficus doliaria*. The juice of this plant is used there as a remedy against a disease which seems to result, like the severe anæmia of the Gothard tunnel workers, from the ankylostomum Dubini. In any case, Dr. Rozzolo has found it the most useful remedy against this parasite, although he does not deny that extract of male fern has been very successful in other hands than his.

JAMES ANDERSON, M.D.

4. *Murrell on Nitre Paper in Asthma.*—Dr. William Murrell (*Brit. Med. Jour.*, June 1881, p. 918) bears testimony to the great value of the fumes of nitre-paper, if properly prepared, in many cases of asthma. Pieces of white blotting-paper, six inches square, are saturated in a hot concentrated solution of chlorate and nitrate of potash. Six of these pieces are laid one over the other, so as to form a thick tablet. Before quite dry, the pieces of paper may be individually sprinkled with Friar's balsam, camphor, or some other aromatic. When used, the tablet is to be folded like a book-cover, and placed on its edges on a plate, and then lighted.

5. *Charteris on the Constitutional Action of Chrysophanic Acid.*—In the *Lancet*, April 1881,

p. 651, Dr. M. Charteris gives the notes of cases of general psoriasis, in which chrysophanic acid was freely rubbed on one side of the body only, precautions being taken to prevent any of the acid touching the opposite side. In each case the disease was perfectly cured. Dr. Charteris ventures upon no speculation as to how the acid may act if given internally. [Dr. Charteris's paper was called forth by a discussion that had previously been carried on in the *Lancet*, pp. 524, 563, 646, relative to a case under Dr. Crocker's care, in which one half of the body had been treated with chrysophanic acid, and the other half with oil of turpentine, and in which the cure was equally rapid; some of the writers attributing this result to the turpentine being of equal value with the acid, others to the fact that the acid was absorbed, and affected the opposite side by its constitutional action. In considering this question, before the actual results of giving chrysophanic acid either hypodermically or internally are known, it would be well to bear in mind the observations of M. Dumontpallier, as to the effect of hypodermic injections on the opposite side of the body to the seat of pain. This observer found that acupuncture of the sound knee quickly relieved the pain of the inflamed knee of the same patient. *Vide* LONDON MEDICAL RECORD, March 1881, p. 92.—*Rep.*]

6. *Carter on Sarsaparilla in Syphilitic Cachexia.*—Dr. William Carter records, in the *Practitioner*, May 1881, p. 357, two cases that will tend to rescue sarsaparilla from the neglect into which it has fallen of late years in the treatment of syphilitic cachexia. One man, who appeared on the point of death, after failure of all other remedies, quickly recovered on a pint of sarsaparilla a day. In a seaman, aged 41, the beneficial effects of the same treatment were also much marked.

7. *Grattan on Pilocarpin as an Antidote to Belladonna.*—Mr. Nicholas Grattan, in the *Lancet*, June 1880, p. 951, reports a case of belladonna-poisoning successfully treated by four doses of pilocarpin, one-fifth of a grain each, injected subcutaneously.

8. *Campbell on Belladonna in Sickness of Pregnancy.*—Dr. W. Macfie Campbell speaks highly of the efficacy of belladonna in repeated small doses, in sickness attending pregnancy; cases having yielded, in Dr. Campbell's hands, to this drug, that had resisted many other modes of treatment. [The value of belladonna in such cases has been long known.—*Vide Medical Digest*, Sections 858.3.—*Rep.*]

9. *Coghill on Antiseptic Inhalations in Pulmonary Affections.*—Dr. J. G. Sinclair Coghill, in the *Brit. Med. Jour.*, May 1881, p. 841, has an interesting paper upon the value of antiseptic inhalations in all lung affections characterised by purulent expectoration. By this means we are enabled to dispense with cough-mixtures by arresting the secretion of the sputa; for, if sputa exist, cough must necessarily follow, and it is dangerous to arrest the cough under such circumstances. Dr. G. Coghill finds the following formula good: ℞ Tincturæ iodi etherealis, acid carbolici, āā ℥ij; creasoti vel thymoli, ℥j; spiritûs vini rect., ad ℥j; M. If the cough be urgent, or breathing embarrassed, chloroform or sulphuric ether may be added at discretion. The mode of inhaling is most important. The patient should be carefully instructed to inspire through the mouth alone, and expire through the nose, as, by this means, the medicated air is forced into the remoter air-cells.

10. *Ringer on Influence of Ammonia in Chloroform Poisoning.*—Dr. Sidney Ringer, in a paper published in the *Practitioner*, June 1881, p. 437, shows, by experiments, the rapid influence ammonia exerted in a frog's heart, whose action had been arrested by an overdose of chloroform. The chloroform evidently paralyses the heart's muscular substance, affecting the ganglionless and nerveless portion of the ventricle exactly in the same way as any other part of it. [In the *Medical Times and Gazette*, May 1871, p. 616, Dr. Neild reports a case of apparent death from chloroform inhalation, which recovered from the alarming state of syncope after four half-drachm injections of liquor ammoniæ into the median cephalic vein.—*Rep.*]

11. *Paggi on Resuscitation in Chloroform Poisoning by Application of Heat to the Præcordial Region.*—Dr. Adolfo Paggi (*Lancet*, June 1881, p. 1015) refers to a case that occurred in his practice while assisting Dr. Labbé, when a patient, under chloroform, ceased to breathe. Artificial respiration and other means, after ten minutes, failed to produce any effect. Dr. Labbé then took a towel, dipped in boiling water, and laid it over the heart. Instantly the pulse and respiration returned. [In the LONDON MEDICAL RECORD, January 1881, p. 15, Jago's plan of percussing the heart in such cases is noted; and, at p. 57, Dr. Reid's method of giving a hot douche, from a height, to the cardiac region in cases of syncope.—*Rep.*]

12. *Hudson on Physostigma as an Antidote to Belladonna.*—Mr. James Hudson, in the *Brit. Med. Jour.*, June 1881, p. 918, reports a case of belladonna poisoning successfully treated by physostigma, injected subcutaneously. Eight hours after the poison was taken the patient was perfectly unconscious, notwithstanding active treatment. In five minutes after the injection he looked round in a surprised manner, and, in five minutes more, was quite himself again.

13. *Kingzett on Oxidised Oil of Turpentine as a New Antiseptic.*—Mr. C. T. Kingzett, in the *Lancet*, June 1881, p. 971, brings forward the oil of turpentine, through which air has been passed for a prolonged period, as a valuable antiseptic agent, being at the same time much cheaper than oil of eucalyptus and more intensely antiseptic than this drug, besides being free from all the objections that attend the use of this agent. Mr. Lister is making trial of the oxidised oil of turpentine, the result of which the profession will await with interest.

14. *Netherclift on Hamamelis Virginica in Hæmorrhoids and Intractable Ulcers.*—Mr. W. H. Netherclift advocates the local uses of a solution of the new extract, 'hazeline', in cases of irritable and inflamed piles, and also in chronic ulcers of the varicose and eczematous description. The success that has attended the use of the extract, in Mr. Netherclift's practice, has been most gratifying.

15. *Mickle on Morphia in Melancholia.*—Dr. W. J. Mickle, in the *Practitioner*, June 1881, p. 430, again enforces the value of morphia in cases of melancholia, which he has on several previous occasions brought before the notice of the profession (*Brit. Med. Jour.*, Oct. 11, 1873). The object of the present paper is chiefly to show the influence small doses of morphia exert on the pulse and temperature, slightly raising the latter without materially affecting the former.

16. *Dolan and Wood on an Experimental Inquiry into Human Milk, and the Effects of Drugs during Lactation on either Nurse or Nursling.*—Mr. Thomas M. Dolan and Mr. W. H. Wood commence, at p. 85 of the *Practitioner*, for 1881, a series of interesting papers on the above subject, undertaken by

Mr. Dolan in order to answer the frequent question, 'Will my medicine have any effect upon the child?' That medicines and foods do affect the milk, and consequently the child, is certain. Frequently, as Mr. Dolan shows, a wet-nurse, on her first arrival, causes the child to thrive; but soon all becomes changed, because, from a laborious out-door life, with few luxuries, the woman is surrounded with good living, and has very little exercise, and consequently her milk ceases to nourish the child. Cause her to resume, as near as possible, her former mode of life and food, then her nursling quickly recovers. A clear description of the best method to analyse human milk is then given, which is, however, too long for insertion, and cannot be condensed. The practical outcome of these elaborate papers is summed up at page 337. 1. All therapeutical agents intended to act on the mammary gland must first enter the blood. 2. All drugs derived from the natural orders, liliaceæ, cruciferæ, solanaceæ, umbelliferæ, etc., enter the blood and impregnate the milk; hence caution is needed in giving such drugs to nursing women. 3. The only approach to a true galactagogue is jaborandi. 4. Belladonna is an antigalactagogue. 5. In inaction of the mammæ, the milk may be increased and influenced by medicines. 6. The milk of the mother may be increased in heat-forming elements by the administration of fats. 7. The salts of milk may be improved by the administration of medicines. 8. Various physiological actions—purgative, alterative, diuretic, etc., may be produced in the child by administering drugs to the mother. 9. If we are to expect any improvement in milk-secreting power, both as to quantity and to quality, we must look to diet for the attainment of that object.

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6. *Iodised Cod-liver Oil.*—It has been found that the addition of iodoform and essence of aniseed will mask the unpleasant odour of cod-liver oil. M. Fonssagrives (*Arch. Méd. Belges*, Jan. 1881) uses the following mixture; 100 grammes of cod-liver oil to one-fourth of a gramme of iodoform; to this twenty-five drops of essential oil of aniseed are added. In this simple way the taste and odour of the oil are masked. Moreover, the iodoform is generally a serviceable adjuvant in cases where the oil is indicated.

18. *Fernet's Method of Introducing Food and Medicine by the Nostrils.*—M. Fernet (*Revue de Thérap.*) wishes to popularise the method of introducing liquid or semi-solid elements, and certain drugs, by the nostrils. The author has seen it employed successfully in newly born infants, too weak to take the breast or milk from a spoon. He proceeds as follows. The patient being laid on his back, a little raised, the end of a spoon or, better, the spout of a close vessel, is brought near to one nostril, and its contents are poured in gently at intervals. The liquid slides over the floor of the nasal fossæ and the roof of the palate, and reaches the pharynx, where it induces movements of regular deglutition. If the operation be well done, the liquid never returns by the other nostril. This method may be applied in certain cases of apoplectic coma, when the patient cannot drink for three or four days successively, in the tuberculous meningitis of children, etc.

19. *Lawrence on Iodide of Ethyl in Asthma.*—The *New York Med. Jour.* for June 1881, publishes three cases of asthma treated with inhalations of iodide of ethyl, with remarkable benefit. They occurred in Dr. R. M. Lawrence's service at the Boston Dispensary. Following the cases are some remarks by Dr. Lawrence, in which he says of the iodide of ethyl: 'Its speedy absorption into the blood, its antispasmodic quality, and prompt reflex stimulation of the respiratory muscles, may reasonably account for its beneficial action in the asthmatic paroxysm, while its power of liquefying and detaching accumulations of mucus sufficiently explains its curative influence in chronic bronchitis. . . . Experience has confirmed my faith in its remedial worth in a large majority of cases of laboured respiration (whether due to bronchial spasm or to increased mucous secretion), and also in certain obstinate cases of dyspnœa, not due to organic pulmonary or cardiac lesions, where other remedies may have proved inefficient. In a small minority of cases it has failed to afford relief.' He does not recommend it as a substitute for internal medication, but rather as an adjunct.

20. *Vidal's Lotion for Diphtheria.*—The following formula is given in *La Presse Méd.*, May 1881. Take 10 grammes of tartaric acid; 25 grammes of hydrolate of peppermint; 15 grammes of pure glycerine; allow them to dissolve. With a brush steeped in this lotion, the diphtheritic patches are touched every three hours. They become reduced to a diffluent pulpy mass, which is afterwards easily removed. In the interval of the application of the tartaric acid, the false membranes are touched with lemon juice. An internal stimulating treatment is prescribed, with substantial and nourishing food.

21. *Eisner's Improved Diachylon Ointment.*—Having experienced much difficulty in preparing and also in keeping diachylon ointment made according to Hebra's direction, Eisner, after considerable experimenting, has arrived at the following formula (*Philadelphia Times*, May 7, 1881), which furnishes an ointment containing a definite amount of oxide of lead, which, with the use of litharge, cannot be estimated. One part of freshly precipitated (from acetate of lead) pure white hydrated-oxide of lead is rubbed with two parts of water, and mixed well with six parts of the best Lucca olive-oil. It should be stirred for about two hours, over a hot-water bath near the boiling-point, and cooled with constant stirring until the proper consistence is obtained. While cooling, a drachm of oil of lavender to the half-pound of ointment is added. This ointment, according to Prof. Eisner, contains the oleostearate of lead, has a neutral reaction, and can be kept in good condition for some time. It is a smooth, whitish, elegant preparation, and is altogether more desirable than that made according to the original formula.

22. *Rollins on Mouth-Washes in Illness.*—As, in acute prostrating diseases, the patient is too weak to brush the teeth, reliance is to be placed in the frequent use of a mouth-wash. Nor will any difficulty be found in this, as even in severe prostration the muscles about the mouth remain strong. As examples of mouth-washes, the following are given. The use of carbolic acid alone, or in combination with an alkali, can seldom be resorted to, because patients associate it with unpleasant places. Benzoic acid, thymol, eucalyptus oil, or boracic acid answers the purpose, and some one of them is generally agreeable to the patient. 1. R—Sodæ boratis, 15 grammes; thymol, 200 milligrammes; aquæ, 1,000 grammes, M.; 2. R—Sodæ boratis, 15 grammes; olei eucalypti, 2 grammes; magnesiæ carbonatis, 4 grammes, M. Rub the oil with the magnesia, add

the water gradually, having dissolved the borax in it, then filter and mark the filtrate 'Mouth wash'. The patient should hold the wash in the mouth for at least a minute, forcing it constantly in and out through the spaces between the teeth, to bring the fluid into contact with the points of decay, changing their reaction from acid to alkaline, and washing out the *débris* collected about the necks of the teeth, and in the spaces between them.

23. *Da Costa on the Use of Iron Hypodermically in Chlorosis.*—Dr. J. M. Da Costa, in a lecture on chlorosis, reported in the *New York Med. Gazette*, says, in speaking of a patient whom he was showing to the class: 'Her rapid improvement is altogether due, I think, to a new remedy which I am employing in a very novel manner. I refer to the rapid introduction of iron into the girl's system, by means of the hypodermic syringe.' Heretofore it has been attempted to introduce iron by this means into the system, but all preparations have proved too irritating. Dialysed iron is neutral and non-irritating, and is followed neither by costiveness nor by disordered digestion. Dr. Da Costa used the iron diluted at first, but later pure, in the dose of fifteen minims daily. This was finally increased to thirty minims, and the patient showed wonderful improvement, the venous murmurs disappearing, the digestion becoming good, and the menstrual flow, which had been absent for several months, appearing regularly again. Dr. Da Costa thinks that the hypodermic use of iron should be retried in pernicious anæmia, the cause of its previous failure being the great disturbances which have attended its use.

24. *Dabney on Apocynum Cannabinum in Anasarca.*—Dr. J. S. Dabney (*New Orleans Med. and Surg. Jour.*, February 1881, and *Chicago Med. Review*) has found, he alleges, that apocynum cannabinum is one of the best diuretics and hydragogue cathartics that can be employed in Bright's disease, as it causes not only marked diminution of the anasarca, but also decrease of the albumen and casts. He claims for it certain advantages. First, a small quantity only is necessary to produce diuresis, emesis, or catharsis. Second, it has an agreeable aromatic taste. Third, it has tonic properties. Fourth, it is harmless, free emesis resulting on an overdose. While many of these claims seem rather strained, still there appears to be but little doubt that the remedy is of much value in ascites, anasarca, and allied conditions.

25. *Saint-Philippe on the Neuralgic Character of Certain Forms of Angina, and their Treatment by Sulphate of Quinine.*—Dr. R. Saint-Philippe, surgeon to the Bordeaux hospitals, points out a certain number of cases of angina observed by him, and characterised by intermittent symptoms, so that the patient scarcely suffers at all in the morning, and is the victim of intolerable pain in the evening (*Jour. de Méd. de Bordeaux*, 20 Mars 1881, p. 371). These forms of angina, which Dr. Saint-Philippe is inclined to refer to neuralgia of the median branch of the trigeminus, are amenable to treatment by sulphate of quinine. He prescribes from 40 to 50 centigrammes (6 to 7½ grains) two hours before the attack, and obtains cure. M. Marotte published analogous cases, in 1874, in the *Bulletin de Thérapeutique*.

26. *Bosse on Turpentine in Diphtheria.*— Dr. Bosse (*Berlin Klin. Wochenschrift*, 1881, No. 9) illustrates this method by several cases. Of the pure oil of turpentine, an adult requires one large spoonful a day; children from six to twelve years, two-thirds of the same; children from one to two years, half of a large spoonful. The tolerance of this medicine is greater than might be expected. Out of eleven cases, only four vomited; if rejected, the dose must be repeated after some hours. Generally, alvine evacuations follow, which possess a penetrating odour of turpentine. After these, the general symptoms, such as fever and headache, cease. There is a rapid recovery; patients, who on the previous day took a spoonful of oil, already recovering the day after, or two days at the most, at least as regards the clearing of the throat, and the disappearance of the exudation. They would die only when assistance was rendered too late; *i.e.*, on the sixth or eighth day. Dr. Bosse attributes this effect of the oil of turpentine to its containing ozone. He denies that it has a caustic effect in swallowing, and mentions Naunyn's example, who (1868) in order to try the physiological effect of this remedy, took in company with his three assistant-surgeons, 300 grammes of turpentine at one dose, 100 grammes thus coming to the share of each, no pain, except a slight headache was experienced by these experimenters; neither albuminuria nor strangury followed.

27. *Laskiewicz on the Treatment of Epilepsy.*—Dr. Laskiewicz (*Przeglad lekarsk.*, Nos. 4 and 6, 1881, *Centralblatt für Nervenheilkunde*, 1881, No. 6) commences the treatment of epileptic patients with bromide of potassium, of which a solution of one gramme is best given in the evening. As often as the attacks are repeated, the dose is increased one gramme daily, until 20, 25, and even 30 grammes are reached. The author mentions a case in which as much as 60 grammes per day was given for some time. This remedy is very differently tolerated. The largest dose which has had an effect is to be continued for months and years, and then diminished with great care. Probably, the patient will then be free from future attacks. If the remedy be not tolerated, atropine must take its place. This it is best to give as an alcoholic solution: 8 centigrammes of sulphate of atropine in 20 grammes of alcohol; this to be kept well closed in a glass. The dose is increased from one to ten drops, the largest dose for adults being twelve drops per day. It will be best to give it in milk or soup, about one hour before or after breakfast. The alkaloids of coffee, cocoa, or tea, diminish the effect of atropine.

28. *Williams on Wood Betony in Atonic Dyspepsia.*—Dr. Williams (*Therapeutic Gazette*, June 1881) reports three cases of atonic dyspepsia, in which, he considers, benefit resulted from the administration of fluid extract of wood betony, in half-drachm doses. Dr. Williams is evidently not an adept at therapeutic experimentation. His first case proves nothing, for the patient, in addition to the wood betony, was ordered 'a good, nutritious diet, containing a fair allowance of fats; or, or in the absence of this, cod-liver oil'. The improvement was gradual at first, but during the third and fourth weeks he gained considerably in weight, as might be expected from an improved diet and cod-liver oil. The second patient was a masturbator, and suffered from 'complete loss of manhood', in addition to dyspepsia. Dr. Williams gave him betony and cascara sagrada, with, subsequently, phosphates and calisaya. At the end of five months he had regained his virile power, and was discharged cured. The third case is that of a married woman, aged 56, who for five or six years had suffered from indigestion, palpitation, and 'flatulence of the stomach and intestines'. Dr. Williams diagnosed atonic dyspepsia, and prescribed the following:—R. Fluid ext. wood

betony, ʒii; fluid ext. chionanthus virg; fluid ext. ladies' slipper, āā ʒi; one half-drachm before meals. The improvement, we are told, was immediate and rapid. [Wood betony is probably a valuable remedy, and is undoubtedly worthy of a more extended trial; but Dr. Williams' paper is practically worthless, and his advocacy is more likely to do harm than good. For some account of the supposed virtues of betony, see *British Medical Journal*, April 2nd and 9th, 1881.—*Rep.*]

29. *Harper on Rhus Aromatica, or the Fragrant Sumach.*—This plant, says Mr. Harper (*The Canadian Pharm. Jour.*, June 1881, p. 342), belongs to the anacardiaceæ, and is popularly known as the sweet sumach, stink bush, or skunk bush. It is a small shrub, growing in dry rocky soil, hedges, and thickets, in most parts of Canada and the United States. In height it varies from three to six feet; it is usually erect, sometimes decumbent, branching, and glabrous. The bark, which alone is used in medicine, is in quills, one to four inches in length, from one-sixth to one-half inch in diameter, and from one-twentieth to half an inch thick. The outer surface varies in colour, from light to dark brown, and is marked with corky protuberances and transverse fissures. When the layer of cork is removed, the outer bark is seen to be of an orange-red colour, longitudinally wrinkled, and transversely fissured. The inner surface is whitish, or flesh-coloured and striated. The bark is brittle, and breaks with a somewhat granular fracture, yielding an ochre-coloured powder, and has a distinct, rather pleasant, odour, and an astringent, aromatic, slightly bitter taste. Rhus aromatica was introduced as a medicine in 1878, but has as yet attracted but little attention. It is said to be 'highly useful in the treatment of diabetes, enuresis, hæmaturia, uterine hæmorrhages, menorrhagia, and other excessive discharges, accompanied by a relaxed condition of the uterus'. The best preparation is a tincture made by macerating four ounces of the dried bark in strong spirit for seven days, and then percolating until it measures a pint. The dose is from twenty minims to a teaspoonful three times a day. A decoction of the bark has been found useful as a topical application to control hæmorrhage. [Some months ago, Dr. Mc Clanahan published, in an American journal, an account of this drug, stating that he considered it one of the most valuable medicines ever introduced to the profession. It had for many years been successfully employed by his grandfather, Dr. John Gray, in the treatment of diabetes, and it was said to answer equally well in diabetes mellitus, and diabetes insipidus. Rhus toxicodendron, the sumach or poison oak, rhus radicans, the poison ivy or vine, and rhus venenata, the poison-wood or ash, have long been used in medicine, having been introduced about the year 1798, by Dufresnoy, a physician of Valenciennes. The rhus toxicodendron was for a time officinal in the *London Pharmacopœia.—Rep.*]

30. *Miller on Decoction of Flax-Seed in the Treatment of Phthisis.—Apropos* of Dr. Blackerby's article on linseed oil, as a specific for phthisis (LONDON MEDICAL RECORD, June 1881), Dr. Miller records a case in which great benefit was derived from a decoction of the seed. The patient is now 73 years of age, and says that about fifty years ago, when quite a young man, he was seized with hæmorrhage from the lungs, after prolonged exposure to intense cold, during an unusually severe winter. The bleeding lasted, off and on, for nearly a week, and reduced him considerably. After this he suffered from cough, with profuse offensive expectoration, night-sweats, loss of appetite, and great weakness. He consulted several physicians, all of whom told him that he was suffering from phthisis. He took a great deal of medicine, but nothing did him much good. At last he was advised to try a decoction of flax-seed. It was made by boiling a handful of the seeds contained in a muslin bag in water, until it became frothy and syrupy in consistence. After being allowed to cool, it was strained, and sufficient honey and old brandy were added to make it palatable. It was taken at irregular intervals, several times a day, in doses of a table-spoonful or more at a time, sometimes alone, and sometimes with sage-tea or mutton broth. The patient rapidly improved on the treatment, and in the course of a month the night-sweating had almost disappeared, the appetite had improved, and the expectoration was much less. His strength improved so much that he was enabled to take comparatively long walks, which in the autumn were extended to the woods and mountains adjacent to his village home, amongst the invigorating pines and the mountain streams. It was more than two years, however, before his health was re-established. For the last forty years he has been well and strong, has had no return of the chest symptoms; and now, on the verge of four-score, is a rugged specimen of his race. [The story is well told, and is well worth reading. The addition of lemon-juice to the linseed-tea might be an advantage]. WILLIAM MURRELL, M.D.

MEDICINE.

RECENT PAPERS.

1. SHEPHERD, F. A. J.—On Vaccination Revived. (*Lancet*, June 1881, p. 978.)

2. BOWLES, ROBERT.—On Stertorous Breathing in Apoplexy. (May 1881, p. 845.)

3. RIX, W. K.—On Desquamation following Scarlatina. (*Lancet*, June 1881, p. 938.)

4. DUNCAN, W. A.—On the value of Early and Repeated Paracentesis in the Ascites due to Cirrhosis. (*Brit. Med. Jour.*, June 1881, p. 879.)

5. ANREP.—On Peripheral Temperature in Lung-Diseases. (*Verhundl. der Physik-Med. Gesellsch. für Wurz.*, Band xiv, Heft 1, 2.)

6. SEIFERT.—Trigeminal Neuralgia. (*Berlin. Klin. Woch*, 1881, No. 11.)

7. SCHREIBER.—The Symptomatology of Mediastinal Tumours. (*Deutsch. Archiv für Klin. Med.*, Band xxvii.)

8. GUYOT, FRANCISQUE.—On Ainhum. (*Le Progrès Méd.*, 1881.)

11. FRAENTZEL.—On severe Cases of Typhoid Fever which run a very acute course without, or with very little rise of Temperature. (*Zeitschr. für Klin. Med.*, Band ii, s. 217.)

12. BERG.—On Diphtheria. (*Wratsch*, Nos. 49 and 51, 1880.)

13. BERNHARDT.—Tabes Dorsalis. (Virchow's *Archiv*, Band lxxxiv.)

14. ERB.—Spinal Myosis and Reflex Pupillary Rigidity. (*Centralbl. für die Med. Wiss.*, No. 17, 1881.)

15. MAURIAC and VIGOUROUX.—On the Magnet, Statical Electricity, and the Tuning Fork in Pseudo-Syphilitic Paralysis. (*Le Progrès Méd.*, 1881, Nos. 19, 21, and 22.)

16. RUNEBERG, J. W.— On Progressive Pernicious Anæmia. (*Deutsches Archiv für Klin. Medicin*, Band xxviii.)

1. *Shepherd on Vaccination Revived.*—Mr. F. A. J. Shepherd, in the *Lancet*, June 1881, p. 978, reports a case of a nurse whom he vaccinated, on the right arm, unsuccessfully, in four places, four years ago. Lately he again vaccinated her on the left arm in four places, producing one well marked vaccine pustule. In a few days the four places on the right arm threw out distinct areolæ, and showed tolerably characteristic marks of successful revaccination. [In the *Med. Times and Gaz.*, Oct. 1861, p. 442, a case of Mr. Byerly developed the pustules two months after vaccination. A case is mentioned by Sir Thomas Watson in the same journal, Dec. 1877, p. 621, of a girl who was vaccinated when an infant, and in whom the spots became again well developed pustules, during an attack of influenza, fourteen years subsequently. Such cases support Sir Thomas Watson's theory that the virus of rabies, etc., may remain lodged in a spot, shut up in a nodule of lymph, or detained somehow in temporary and precarious union with some of the animal tissues, without entering the blood itself, for a longer or shorter time—in some cases, perhaps, never.—*Rep.*]

2. *Bowles on Stertorous Breathing in Apoplexy.*—In the *Brit. Med. Jour.* May 1881, p. 845, Dr. Robert Bowles again draws attention to the great value of position in relieving one of the most distressing and dangerous conditions of the apoplectic state, namely stertor. [Previous papers may be consulted, *Med. Times and Gaz.*, Jan. 1860, p. 126; *Lancet*, June 1870, p. 875, Dec. 1880, pp. 971, 1018.] If a patient with an attack of apoplexy be laid on the side paralysed, immediately the stertor ceases, from the fact that the tongue falls on one side, allowing free ingress of air to the lung on the sound side, which is better able to carry on its functions. The cerebral circulation on the diseased side is also, by this plan, relieved from all hypostatic congestion, and this may have a material effect in relieving the urgent symptoms. Dr. Bowles distinguishes several kinds of stertor: palatine, pharyngeal, mucous, nasal, laryngeal, and buccal stertor. Nasal stertor is readily removed by mechanically dilating the paralysed nares. It is the pharyngeal form of stertor that so seriously aggravates the symptoms, adding suffocation to the apopletic phenomena; and on removal of this symptom, by the simple act of change of position, the change from certain death to life is frequently obtained.

3. *Rix on Desquamation following Scarlatina.*—In the *Lancet*, June 1881, p. 938, Mr. W. K. Rix, of the Fever Hospital, Bradford, states that in cases of fever, attended with intensely bright scarlet rash and high temperature, the desquamation may be completed in thirty days; that the great majority of cases, however, require from sixty to seventy-two days before they are fit to be discharged. In many cases, after nine weeks' quarantine, it is extremely doubtful whether the old thick skin from the heels has quite fallen off. That the dead skin from scarlatinal patients does carry infection, there appears to be little doubt; but that other factors are at work also appears certain, for frequently patients have been discharged, after all evidence of desquamation had long disappeared, the hair had been cut short, the clothes all changed, and every precaution possible taken to avoid infection, yet fresh cases have occurred within a week of the patient mixing with his brothers and sisters.

4. *Duncan on the Value of Early and Repeated Paracentesis in the Ascites due to Cirrhosis of the Liver.*—Dr. W. A. Duncan, in the *Brit. Med. Jour.*, June 1881, p. 879, reports a case of a gentleman, aged 46, who came under treatment for ascites, and in whom paracentesis was performed eighteen times within a year, making a complete recovery. A valuable summary of the opinion of authorities upon the subject concludes a very instructive paper. [At section 1000–2 of the *Medical Digest* many remarkable cases of a similar nature are noted.—*Rep.*]

RICHARD NEALE, M.D.

5. *Anrep on Peripheral Temperatures in Lung-Diseases.*—The author's observations were made on fifty cases of lung-disease, with a specially constructed thermometer, which may be described as an ordinary clinical thermometer in which the bulb has been flattened out horizontally, and is protected from draughts by a glass bell springing from the sides of the tube below the index. With two such instruments accurately compared beforehand, he observed (*Verhandl. der Physik. Med. Gesellsch. in Würzburg*, Band xiv, Heft 1, 2) the temperature on opposite sides of the thorax of healthy individuals. He found the average to be about 96.3 deg. Fahr.; but the temperatures were very rarely the same, the difference varying from 0.2 deg. Fahr. to 0.5 deg. Fahr., sometimes on the one side, sometimes on the other. The cases of lung-disease observed were pleurisy, croupous pneumonia, and chronic catarrhal pneumonia. In pleurisy the cutaneous temperature of the affected side (thermometer in an intercostal space) is higher than the axillary temperature of the opposite side, and the highest temperature corresponds to the time of most rapid effusion. The cutaneous temperature of the opposite side is also slightly raised. In pleurisy without effusion, the rise of cutaneous temperature is neither so great nor so long continued. In cases of croupous pneumonia, the difference between the two sides amounted to as much as 2.7 deg. Fahr.; and from the tables given by Dr. Anrep it can be seen that those parts of the lung in the first stage of inflammation, before crepitation has appeared, give a higher temperature than those completely solidified. In chronic catarrhal pneumonia, the cutaneous temperatures closely agree with the local progress of the disease; and in one case fully recorded the rapid rise of temperature over the apex, followed by a fall as the symptoms of a large cavern developed themselves, is very striking, more especially as the temperature over the cavern continued lower than all the rest of the chest. The author believes that the observation of cutaneous temperatures is, even at present, of practical value; and when the clinical thermometers now in use are replaced by thermomultipliers, we shall be able to derive from it most valuable information.

JAMES ANDERSON, M.D.

6. *Seifert on Trigeminal Neuralgia.*—Dr. Seifert (*Berlin. Klin. Wochensch.*, 1881, No. 11) publishes three cases of trigeminal neuralgia, in which he successfully employed compression of the carotid, as recommended by Gerhardt. The compression was made to last from 15 seconds to 1½ minutes, and repeated as often as the pain was interrupted, while arsenic and quinine were likewise administered. Gradually, the intervals were lengthened.

7. *Schreiber on the Symptomatology of Mediastinal Tumours.*—A. Schreiber (*Deutches Archiv für Klin. Med.*, Band xxvii, s. 52, *Central. für die Med. Wiss.*, No. 17, 1881) bases his remarks on four cases observed in Ziemssen's clinic. 1. A girl, aged 21, complained for some months of palpitation and breathlessness. There were physical signs of left-sided pleuritic effusion; later on, a peculiar dulness de-

veloped, which began at the right costal cartilages and ran across the sternum to the left anterior axillary line, then downwards and backwards, and finally, horizontally to the spine. The pleura was punctured many times with temporary benefit. There were then some difficulty in swallowing, and slight right-sided pleuritic effusion. There was a fibro-sarcomatous tumour as large as a man's head. 2. A baker, aged 17, complained for eight days of cough, pain in the chest, and loss of appetite. The expression of his face was anxious, the skin was yellowish, the veins of the neck were distended. He had a barking cough. There were paralysis of the right vocal chords, and multiple swollen lymphatic glands. He had slight fever. Later on there was increased glandular swelling, especially along the lower border of the pectoralis major. He had increasing breathlessness. There was dulness above the heart, reaching up to the clavicle and to the axillary line. Section showed a round-celled sarcoma of the anterior mediastinum, with numerous metastases which pressed on the vena cava and recurrent nerve. 3. This case was that of a woman, aged 35, with diffuse fibro-sarcoma of the mediastinum, which led to metastases in the lungs, and to closure of the vena cava and subclavian vein. 4. A peasant, aged 31, had been ill 8½ years. He was breathless and had swollen veins on the thorax. There was a resistant tumour in the left supraclavicular region. He had œdema of the face. There was protrusion of sternum and superior thoracic region. There was absolutely empty note over the whole sternum and along the right sternal border. The dulness was limited to the left by a line drawn from the attachment of the third rib, outwards and downwards to a centimètre outside the nipple.

8. *Guyot on Ainhum.*—Dr. Francis Guyot (*Le Prog. Méd.*, 1881, No. 19) gives a description of this peculiar tropical disease, and adds four cases observed by himself. It is met with in North Africa, in Southern India, Central America, and some of the Pacific Islands. It affects generally the fifth toe, but sometimes the fourth, and more rarely many or all the fingers and toes. The chief symptom is an annular groove round the affected member, deeper on the palmar or plantar surface, growing deeper as it advances until amputation results. The surface of the fissure is normal; sometimes it is bathed in serous fluid, sometimes the segment above the fissure becomes swollen. In some cases the tissues of the stump are normal, more often atrophied or undergoing fatty degeneration, but preserve a healthy nucleus. There is neither inflammation, constitutional reaction, nor pain. It lasts often many years. It has no ultimate bad effects on the general health. The negroes attribute it to a parasite, but there is no evidence in favour of this view. Females do not escape. Consanguinity probably plays some part. No treatment is of use, though Da Silva Lima cured one case by an incision at right angles to the groove.

9. *Schiller on a Case of Catalepsy with Speech-reflexes.*—Schiller (*Bres. Aertzl. Zeit.*, 1880, No. 21, and *Central. für die Med. Wiss.*, 1881, No. 17) reports the case of a previously healthy girl, aged 10 years, who became suddenly unconscious; the night before she had complained of stomach-ache, which had disappeared in the morning. The limbs could be moulded into any positions, and, in spite of their inconvenience, retained these for some time, and then gradually sank down again. Stroking from below upwards in the umbilical region made the child give a peculiar cry, which was not caused by deeper and sharper pressure on the same place. Also touching a place close to the manubrium sterni caused a peculiar cry. Strong electrical stimulation (the electric brush) and a vinegar enema, cured her after the lapse of one hour and a half. On other days, there were symptoms of commencing chorea in the facial muscles and fingers, which afterwards disappeared. The child has remained quite well for more than six months since the attack, of which she retains no recollection.

10. *Senator on Pneumothorax and Empyema.*—H. Senator (*Zeit. für Klin. Med.*, Band ii, s. 231) brings forward four cases to disprove the current opinion that fluid effused in the course of a pneumothorax must be purulent. He insists on the frequency of bilateral pleurisy in unilateral pneumothorax, and the occurrence of late pericarditis in cases of pneumothorax. When exudation takes place in pneumothorax due to internal injury of the lung, the fluid seldom putrefies in spite of the free access of air. He urges the point, overlooked in the text-books, that pleuritic effusion in children is generally purulent. With regard to the treatment of pneumothorax he lays down these rules. 1. If only air be present, no good can be done by operative interference. 2. If fluid be also present, the fluid should be tapped, not the air. 3. If the fluid be putrid, an incision must be made. Aspiration is indicated with serous or purulent exudations in phthisical patients. He recommends that the pus should be diluted by the injecting of an indifferent fluid, so that it will run better through a fine trocar, and what is left behind will be more easily absorbed. He avoids disinfecting the pleural cavity or emptying it completely.

11. *Fräntzel on Typhoid Fever with Low Temperature.*—Fräntzel (*Zeit. für Klin. Med.*, Band ii, s. 217) describes severe cases of typhoid fever which attack exhausted individuals, and which run their course with low temperature or without fever, but in which occur general collapse, serious cerebral symptoms, and tendency to gangrene of the extremities, which run a strikingly acute course. Such cases indicate that high temperature is not the only cause of death in typhoid fever, but that cerebral symptoms are of great importance, and that patients even with low temperature must be carefully watched, to preserve them from the many evil consequences of even quiet delirium. ROBERT SAUNDBY, M.D.

12. *Berg on Diphtheria.*—In this paper (*Wratsch*, Nos. 49 and 51, 1880), Berg makes some remarks on 192 cases treated, in part in the Ambulance, in part within the Children's Hospital at Charkow. A small number of observations are of especial value from this source, since little work has been published concerning the epidemics of diphtheria in Southern Russia, and because the cases were treated in hospital, and hence could be more carefully watched. The epidemic broke out towards the end of 1878, and continued throughout 1879. The interesting observation was made, that the number of cases always increased after a great change of temperature. Infection was usually the result of direct contact, but in one case infection was conveyed by a third person, who himself remained well. Of the patients treated in the hospital, 41 per cent. died, this large mortality depending on the fact that a great number of them were in a hopeless condition when first seen. The majority of the children were between two and eight years of age, the percentage mortality decreasing as the age rose. Berg divides

the cases clinically into two classes.—1. *Slight form.* Recovery took place after four to six days, the temperature never rising above 102.7. The membrane spread equally in all directions, healing progressing from periphery to centre. The membrane was yellowish-white in colour, easily detached, and odourless. The submaxillary glands were always swollen. 2. *Severe form.* The temperature rose to 103.2. The membrane was usually distributed bilaterally, of a dirty tint, stinking, and rapidly invading the larynx. In the majority of the cases, death occurred in five to seven days from paralysis of the heart. The invasion of the larynx often resulted from the swollen and elongated uvula coming into contact with the root of the tongue and epiglottis, and so spreading the process. In two cases hæmorrhages took place beneath the skin, and in one case there was subcutaneous emphysema in the neck. The treatment chiefly consisted in painting with a 10 to 15 per cent. solution of chloride of iron in glycerine, and the use of a 5 per cent. gargle of chlorinated potass. Other drugs were tried (in three cases benzoate of soda) without good results. Pilocarpin was not tried. G. H. MAKINS.

13. *Bernhardt on Tabes Dorsalis.*—Dr. M. Bernhardt of Berlin (Virchow's *Archiv*, Band lxxxiv, Heft 1) gives the following percentages of the frequency of symptoms in 58 cases of demonstrated tabes dorsalis: loss of patellar reflex, 95.6; ataxy, 94.1; staggering with eyes shut, 90.2; sensation of weariness on slight exertion, 92.0; alterations of sensibility, 85.9; lancinating pains, 79.5; vesical troubles, 74.7; rigid pupils, 48.4; impotence, 43.7; double vision, 39.6; delayed transmission of pain, 34.37; analgesia, 31.6; myosis, 27.2; atrophy of the optic nerve, 10.3. He failed to observe the coincidence, stated by Fischer, of delayed pain, vesical troubles, and absent patellar reflex. He found no constant relation between the tendon and skin-reflexes. He did not observe the polyæsthesia (feeling double or more when touched with one point of the æsthesiometer) described by Fischer. He doubts Müller's statement that joint-affections occur early in the disease; he has seen two or three cases. He doubts the frequency of aortic insufficiency alleged by Berger, Rosenbach, Letulle, Parrot, and thinks we should wait for the fact to be proved *post mortem.*

14. *Erb on Spinal Myosis and Reflex Pupillary Rigidity.*—Prof. W. Erb (*Centralbl. für die Med. Wiss.*, No. 17, 1881) has found that, out of 84 cases of tabes dorsalis, 59 had absolute reflex pupillary rigidity, 12 showed very feeble and low reaction to light, and in 13 the reaction was normal. In 5 cases this symptom was unilateral, in 7 there was more or less advanced atrophy of the optic nerve. Out of the 71 cases in which more or less rigidity was present, 37 had distinct myosis, 34 had normally wide pupils, sometimes unequal. Myosis was absent in quite half the cases. Of the 71 cases, 43 were in the initial stage; in the remaining 28 the ataxy was already manifest. These symptoms may therefore appear quite early in the disease, or, on the other hand, be absent after it has existed for years; a closer connection between syphilis and pupillary rigidity appears not to exist in tabes. Out of 16 cases of progressive cerebral paralysis, he found the pupils only twice normal; in 10 they were unequal, but of these only 3 showed rigidity; in 4 cases there was myosis combined with rigidity. All this holds good also of the earlier stages of the disease. Very much more often were pupillary differences observed, 10 times in 16 cases; the reflex rigidity, on the other hand, only 7 times (once unilaterally). This symptom was also noticed several times in other diseases (anæmia, syphilis, tumours); in myosis after disease of the cervical sympathetic, the reaction to light is generally preserved, as well as in lesions of the cervical part of the spinal cord. Myosis and rigidity do not appear to occur together in healthy persons; in uncomplicated senile myosis, the reaction to light is unaffected. They must therefore be regarded separately. Respecting the former, it is most probable that the pupil-dilating centre, or its tract in the spinal cord or in the cervical sympathetic, is paralysed; the rigidity, on the other hand, seems to be due to some change in the reflex arc, which lies between the centres of the optic nerve and the third nerve. Further observations, by irritation of the peripheral cutaneous nerves, showed that not only was there paralysis of the reflex contraction of the pupil, but also of the reflex dilatation, so that the expression 'reflex rigidity' is doubly correct.

ROBERT SAUNDBY, M.D.

15. *Mauriac and Vigouroux on the Magnet, Statical Electricity, and the Tuning-Fork, in Pseudo-Syphilitic Paralysis.*—Drs. Ch. Mauriac and R. Vigouroux (*Le Progrès Méd.*, 1881, Nos. 19, 21, and 22) have published two examples of what they describe as a rare form of nervous disorder occurring during the course of syphilis, but of which it is difficult to determine exactly what part syphilis plays in their determination. The first case was that of a man, a haircutter, aged 22, who had chancres, followed by roseola, crusts on the scalp, sore mouth, with headache, fever, and night-sweats. After treatment for two months he was discharged cured, but soon returned with a painful tumour over the inner aspect of the arm, along the inner border of the triceps; under large doses of iodide of potassium this rapidly disappeared, but the limb became anæsthetic, with loss of motor power, and preservation of normal electrical reactions. This did not improve under iodide; but the application of a magnet caused headache, and complete transfer of the anæsthesia and paralysis to the sound arm; repeated applications cured these for a time, but he relapsed after a few days. Statical electricity, repeated three times, produced no effect but slight numbness of the fingers and dorsum of the hand. By introducing the sound hand into the resounding box of a large tuning-fork (ut 3), transfer of the affection was effected, and at the same time there was produced hemianæsthesia of the sound side, with loss of taste, smell, hearing, diminution of the field of vision and visual acuity, and complete colour-blindness; in every respect this resembled hysterical hemianæsthesia. By the following day the phenomena had changed sides, even the artificially induced hemianæsthesia having become transfered. By repeated applications, a cure was effected: the patient went home, relapsed again, was put on iodide of potassium, and after taking it for some time, got well suddenly, and has remained well. The second case was that of a man, aged 40, who denied all venereal antecedents, and the diagnosis of constitutional syphilis rested on the presence of a fissured and atrophied tongue. He had been epileptic when young, and his mother suffered from the same disorder. After suffering from diffuse superficial headache, worse at night, he became hemianæsthetic, the anæsthesia affecting the special senses, with some loss of power in the lower extremity. The magnet and tuning-fork caused malaise and insomnia, but had no influence on the neurosis. Statical electricity caused transfer, and cured him

after twenty sittings of forty to forty-five minutes each. The authors admit that the evidence of syphilis was not clear, but the lesion of the tongue was regarded as syphilitic, both at the Hôtel-Dieu and at St. Louis. The phenomena were not those of ordinary syphilitic paralysis, yet a localised lesion in the posterior part of the internal capsule would be capable of giving rise to these symptoms. The early epileptiform attacks in the first case, and the existence of hystero-epilepsy in the mother of the second, indicate that in both there was a predisposition to nervous affections. The inefficacy of ordinary antisyphilitic remedies is opposed to the notion that these symptoms depended directly on syphilitic lesions; but syphilis probably played the part of an exciting cause.

16. *Runeberg on Progressive Pernicious Anæmia.*—Professor J. W. Runeberg, of Helsingfors (reprint from *Deutsches Archiv für Klin. Med.* Band xxviii), has published nine cases of so-called progressive pernicious anæmia, in five of which death occurred, and necropsies were performed. He found it to be the rule in his cases for remissions to take place, and the histories of his patients show several temporary recoveries. A predisposition to anæmia seemed to exist in most of the individuals. He points out that in John Mason Good's *Study of Medicine*, published in 1829, he describes a form of anæmia, and publishes in full a case of Dr. Combes' of Edinburgh, which leaves little to be desired to complete the clinical picture of pernicious anæmia. He also quotes a case by Prof. Ilmoni, from the third volume of the *Transactions of the Finnish Medical Society for* 1845. For some reasons these early descriptions were unnoticed; and at the time that Biermer reawakened our interest in the study of the disease, its very existence was denied by leading authorities, such as Niemeyer.

ROBERT SAUNDBY, M.D.

SURGERY.

RECENT PAPERS.

1. LANGENBUCH.—On the Use of Antiseptics in Lithotomy. (*Archiv für Klin. Chir.*, Band xxvi, Heft 1.)

2. VON NUSSBAUM.—Enterotomy, Gastrotomy, and Drainage of the Liver.

3. THOMAS, T. G.—Ovarian Tumour treated by Incision and Drainage. (*New York Med. Jour.*, June 1881.)

4. JERSEY.—So-called Rupture of the Internal Lateral Ligament of the Knee-Joint. (*Ibid.*)

5. ROCKWELL.—Electricity in the Treatment of Exophthalmic Goître. (*Ibid.*)

6. BERGER and ONIMUS.—Treatment of Hæmatic Cysts of the Thyroid Gland by Electrolysis. (*Bull. Gén. de Thérap.*, May 15.)

7. WILL, J. C. OGILVIE.—On the Catheter Treatment of Perineal Fistula. (*Lancet*, June 1881.)

8. SCHENCK, P. V.—On One Hundred and Ten Cases of Emmet's Operation. (*St. Louis Cour. of Med. and Col. Science.*)

9. PREWITT, T. F.—On Gastrotomy in Stricture of the Œsophagus. (*Ibid.*)

10. GOULD.—Oil of Eucalyptus as an Antiseptic in Listerism. (*Lancet*, May, 1881.)

11. RUSSELL, G.—On Removal of a Wine-Bottle from the Rectum. (*Brit. Med. Journ.*, May 1881, p. 848.)

12. GREENE, CHAS. H., and MACPHAIL.—On Simple Methods of Reducing Dislocated Shoulder. (*Lancet*, May 1881, pp. 769, 876.)

13. REEVES, H. A.—On a New Method of Treating Rectal Fistulæ. (*Brit. Med. Jour.*, June 1881, p. 917.)

14. GRIFFIN, F. C. J.—On Treatment of Compound Fractures and Wounds of Joints by Glycerine and Carbolic Acid. (*Lancet*, June 1881, p. 985.)

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1. *Langenbuch on the use of Antiseptics in Lithotomy.*—Dr. Langenbuch, in a paper (*Archiv für Klin. Chir.*, Band xxvi, Heft 1) in which he very strongly advocates suprapubic lithotomy in preference to every other method of removing vesical calculi, describes a plan devised by him for the removal of exceedingly large calculi. After the bladder has been distended with water, and 400 to 600 grammes of water have been introduced into an India-rubber bag placed in the rectum, a horizontal incision, eight to ten centimètres in length, is made along the upper border of the symphysis, at right angles to the middle line of the body. The soft parts are separated from the anterior margin of the pelvis down to the bladder, the anterior wall of which and the paravesical pouch of peritoneum, are laid bare. The latter is divided to the same extent as the cutaneous incision. Each end of the cutaneous incision is now carried upwards for two or three centimètres, so that a U-shaped flap of the entire thickness of the abdominal wall is raised. This flap is displaced backwards, posteriorly to the vertex of the bladder, and fastened in this position by sutures (which are not passed through the entire thickness of the vesical wall). In this manner a new closed peritoneal fold, some centimètres higher than the normal, is established in five to eight days: in consequence of its more posterior position, it is much less exposed to injury during the removal of large calculi. The further treatment is identical with that adopted in the usual suprapubic operation.

2. *Von Nussbaum on Enterotomy, Gastrotomy, and Drainage of the Liver.*—In an address given before the Munich District Medical Society, Nussbaum dilates enthusiastically upon the advances made in the region of laparotomy, since its special dangers have been recognised and we have learned to avoid them, and especially dwells on enterotomy and gastrotomy. By enterotomy, he means the operation recommended by Maisonneuve and Fengel for cases of ileus, in which, an incision being made in the right iliac fossa, the gut is opened above the seat of obstruction without regard to the nature or exact situation of the obstacle. The operation, in itself an easy one, is, when antiseptic precautions are taken, not at all dangerous. The importance of Max Müller's proposal to draw the parietal peritoneum over the wound in the abdominal parietes is dwelt upon. The collected results of enterotomy are, up to the present, so favourable that a surgeon, who allows his patient to perish from obstruction of the bowels without resorting to it, lays himself open to grave reproach. He views, with particular pleasure, the most recent advances in gastrotomy, especially in cases of stricture of the œsophagus (which, introduced in 1846 by Sedillot, met with no success until Verneuil's case in 1876). Adverting to Czerny's experiment on animals, he states that for more than a year he had been in hopes of operating for cancer of the stomach (during which time, indeed, the operation has been carried out); and concludes with the narration of a case in which he performed laparotomy, under the idea that a tumour of the pylorus existed. On opening the abdomen, however, a nodule in the liver (apparently the result of a gunshot injury) was discovered, and, this being incised and drained from the bottom, the patient made a

good recovery, with entire relief from pain in the nodule, from which he had suffered before the operation. G. H. Makins.

3. *Thomas on Ovarian Tumour Treated by Incision and Drainage.*—In the *New York Med. Jour.* for June 1881, Dr. T. Gaillard Thomas relates the case of a lady, on whom two attempts had been made to extirpate a large ovarian tumour, which attempts were abandoned on account of the extensive adhesions encountered and the profuse hæmorrhage that took place. The patient's health became very much depreciated, and on several occasions she passed into a state of collapse, and was thought by her physician to be dying. She now entered Dr. Thomas's private hospital, where, after vain endeavours to improve her condition by great care and thorough drainage (a drainage-tube having been inserted by the surgeon who first attempted the removal of the tumour, and the opening still persisting), Dr. Thomas cut directly down upon the tumour, and, without opening the peritoneum, tried to enucleate it. There was such great hæmorrhage, however, and the sac was so universally attached, that he gave it up, and cut directly into the mass, when a large amount of colloid fluid escaped. Carrying his hand into it, he found a large number of sacs, each about the size of a cocoa-nut, filled with fluid, which he broke up. One existed almost outside of the large tumour, and it was into that that the India-rubber tube had been inserted by the surgeon, and pus withdrawn. He opened this thoroughly, exercising care that none of its contents should enter the peritoneum. Two glass drainage-tubes were then inserted, one above and one below, in Douglas's cul-de-sac, through which carbolised water could be injected. The patient was placed upon the most nutritious diet, and injections of carbolised water were employed. The tumour diminished in size until it was not larger than the head of a child at birth; and one month after the operation she left the hospital, with instructions to keep up the injections of carbolised water. A month later she appeared to be perfectly well, a cyst of the size of a goose's egg still remaining, which she drained with perfect ease.

4. *Jersey on so-called Rupture of the Internal Lateral Ligamant of the Knee-Joint.*—In a thesis submitted for graduation at the College of Physicians and Surgeons, New York, and published in the *New York Med. Jour.* for June 1881, Dr. Charles A. Jersey questions the existence of the condition known under the name of rupture of the internal lateral ligament of the knee-joint, and expresses his opinion, on the strength of clinical observations and experiments on the cadaver (the latter having been performed in the prosector's room at the college, under the direction of Dr. William T. Bull), that the injury in question really consists in a fracture of the tuberosity into which the ligament is inserted. He sums up his conclusions as follows. 1. Many cases of so-called rupture of the internal lateral ligament of the knee-joint are in reality cases of fracture of the internal tuberosity of the condyle. 2. Many of the more severe sprains are fractures of the tuberosity. 3. The absence of bony crepitus is no certain sign of the non-existence of fracture at this part. 4. The diagnosis rests upon the extreme lateral motion, the severity of the pain on manipulation, the localised pain always found at a certain point, and the length of time required for complete recovery.

5. *Rockwell on Electricity in the Treatment of Exophthalmic Goître.*—In the *New York Med. Jour.* for June 1881, Dr. A. D. Rockwell alludes to eight cases of exophthalmic goître previously recorded by him as having been treated with electricity—three ending in recovery, and one in approximate recovery—and gives the history of an additional case in which the result was favourable. This method may be thus described. The cathode is placed over the cilio-spinal centre, above the seventh cervical vertebra, and the anode in the auriculo-maxillary fossa, gradually drawing the latter (after a few moments of stabile treatment) along the inner border of the sterno-cleido-mastoideus muscle, to its lower extremity. The second step in this process consists in removing the anode to the position occupied by the cathode, and placing the latter over the solar plexus, using for a few moments longer a greatly increased strength of current. In other cases, currents alternately increased and diminished may prove most effective. The general application of the faradaic current sometimes proves an important factor in the method of treatment. It is not very difficult to believe, he remarks, nor to understand why, general faradisation is so effective in lowering a pulse that is rapid as a result of nervous excitement, and in increasing its strength when it is both rapid and weak through nervous exhaustion. It is more difficult to explain why this result is so pleasantly obtainable in cases of exophthalmic goître in which the galvanic current, after benefiting up to a certain point, fails to do more. The faradaic certainly does not affect the sympathetic so directly and powerfully as the galvanic current does; and we are obliged, for an explanation, to refer to its well-known superior tonic properties, and to the fact that the complete and thorough excitation of the cutaneous nerves by general faradisation is followed by a greater and more desirable reflex influence. In a case of over thirty years' standing, which the author recently treated, but in which he failed to cause any appreciable reduction in size, this power of one current to supplement the action of the other was well illustrated. The pulse of the patient was constantly at or above 115. The action of the galvanic current reduced it to 105, but failed to do more than this after considerable effort. General faradisation was then attempted, with the result of effecting within a week a further and seemingly permanent reduction of twelve beats. At the same time the patient's general condition was much improved.

6. *Berger and Onimus on the Treatment of Blood-Cysts of the Thyroid Gland by Electrolysis.*—M. Berger, in the name of M. Onimus and himself, read a communication on this subject at the last meeting of the Paris Société de Chirurgie (*Bull. Gén. de Thér.*, May 15, 1881). A lady had suffered for a year and a half with a tumour on the left side of the thyroid gland, and, latterly, it had rapidly increased in size. The first puncture was almost immediately followed by a relapse. The tumour rapidly became as large as an apple; it was movable, colourless, fluctuating, and already gave rise to disturbances in the action of the air-passages. M. Onimus proposed to treat it by electrolysis. On the 30th January, MM. Berger and Onimus made a puncture, which gave issue to about 150 grammes of a chocolate-coloured liquid. A carbolated injection was then made by the channel; then an injection of a solution of iodide of potassium of ten degrees of strength. There was then introduced into the cystic cavity, filled with this solution, a metallic stem placed in communication with the positive and negative poles of the electric pile, of from 24 to 36 elements, whilst the other pole was

applied on the periphery. There was a little hæmorrhage. In a short time the cavity refilled itself, and the tumour was as large as ever. The day after the operation there was an attack of intermittent fever, which was only one of those diathetic reminders pointed out by M. Verneuil. M. Berger gave up the patient five months ago, being persuaded that it was a bad case. Four weeks ago he discovered that from the size of an apple the tumour had become reduced to that of a nut, and since that time it had decreased in considerable proportion. M. Boinet also related several cases in which he obtained excellent results after puncture, followed by the iodised injection. It was a mistake to believe that the iodised injection was also followed by acute inflammation, for in the cases to which he alluded there was neither inflammation nor suppuration. M. Delens remarked that he could not quite understand the curative action of electrolysis in M. Berger's case. The treatment was complex; there had only been one application. Generally the action of electrolysis was much more slow, and it was necessary to repeat it frequently. M. Desprès pointed out that there were serous cysts with thin walls, which were cured with one simple puncture, and there were others with anfractuous walls, with syrupy and sticky contents, on which treatment was excessively difficult. In fact, in these cases the iodised injection did not succeed better than anything else. M. Le Dentu agreed with the last speaker as to the fact that there were mild cysts, and there were others in which the treatment was very difficult. It was not always easy to ascertain which variety was present. A puncture was made, blood flowed, and sometimes there was great difficulty in arresting the hæmorrhage. The therapeutic treatment should therefore be varied according to the cases in serous cysts. The iodised injection left excellent results in sanguinous cysts. There was often a gangrenous inflammation, which might go on to elimination of the sac. The effect of electrolysis had yet to be determined. M. Berger concluded by owning that he was opposed to iodised injection, but he believed in certain sanguineous cysts electrolysis brought on coagulation.

7. *Will on the Catheter Treatment of Perineal Fistula.*—In the *Lancet*, June 1881, p. 941, Dr. J. C. Ogilvie Will reports two severe cases of perineal fistulæ which were cured by this simple, and easily carried out, procedure. The difficulties that attend retention of a catheter in the bladder are chiefly two: first, the fact that frequently the instrument becomes quickly incrusted with phosphates. This Dr. Will overcame by constantly removing and cleansing the catheter. [In the reporter's practice, a red India-rubber catheter retained for two years or more in a female bladder on no occasion became incrusted with phosphates; it was occasionally expelled or dislodged during sleep or movements, and immediately returned, yet never required cleansing.] The second difficulty is to retain the catheter. This Dr. Will effected by passing an elastic ring over the glans, lodging it in the groove behind, and to this attached the catheter by threads.

8. *Schenck on One Hundred and Ten Cases of Emmet's Operation.*—In the *St. Louis Cour. of Med. and Col. Science*, Dr. P. V. Schenck, in a paper on the results of Emmet's operation, from one hundred and ten cases observed in his own practice, arrives at the conclusion that the operation should be an immediate one. The fatal results of the operation are few. Emmet reports two in 200 cases; Goodell one in 54; Engelmann, Baker, and Marcy each one case. In Dr. Schenck's 110 cases there were no ill results, although the patients were not placed under the preparatory treatment, on which, in the opinion of some authorities, the success of the operation depends. Perfect union was obtained in all but five, and in only two cases did no union take place. Dr. Schenck gives abstracts of eight cases in illustration of the results of the operation.

9. *Prewitt on Gastrostomy in Stricture of the Œsophagus.*—A paper by Dr. T. F. Prewitt on gastrostomy in stricture of the œsophagus will be found in the *St. Louis Cour. of Med. and Col. Science.* It is accompanied by a table of fifty-nine cases. Dr. Prewitt considers the great difference in mortality from the operation in cases of this class, when compared with the same operation for the removal of foreign bodies, to be due to the exhausted condition of the subject. It is his belief that it can be greatly lessened if the operation be performed early. In a large percentage of fatal cases, even though union had taken place, no peritonitis existed, and death was due to exhaustion. Gastric fistula is not incompatible with long life. Of the forty-nine cases tabulated, forty were malignant, twelve cicatricial, three syphilitic, and in four the nature of the stricture was not given, but was almost certainly malignant. Of these cases, operated upon for malignant disease, the patients lived from fourteen days to six months, and one patient is still living comfortably. In the cicatricial variety six recovered, as also one where the stricture was of syphilitic origin. In but seven of the whole number is peritonitis stated to have existed. Exhaustion alone is assigned as the cause of death in the large proportion of cases.

10. *Gould on Oil of Eucalyphus as an Antiseptic in Listerism.*—Before the Clinical Society, Mr. Pearce Gould brought forward the claim of oil of eucalyptus as a valuable substitute for carbolic acid in antiseptic operations (*Lancet*, May 1881, p. 828). Cases occasionally occur, one of which formed the basis of Mr. Gould's paper, in which serious and even fatal results follow from the absorption of the carbolic spray and gauze. Mr. Gould has prepared a gauze that answers all the purpose of Lister's carbolic gauze, that gentleman being among the first to herald the discovery of so fitting a substitute.

11. *Russell on Removal of a Wine-Bottle from the Rectum.*—Mr. G. Russell reports, in the *Brit. Med. Jour.*, May 1881, p. 848, a case that occurred in the hospital practice of Mr. W. Dunnett Spanton, where a man sat on a hock-bottle in order to introduce butter into the rectum to destroy thread-worms; thus sitting, he gradually introduced the whole bottle and could not extract it. After many futile attempts at the hospital to withdraw it per rectum, the descending colon was opened, and the bottle easily withdrawn, death following in eighteen hours. [Had a hole been drilled or punched through the bottom of the bottle, which lay external to the sphincter, might not one or more fingers have been hooked therein, and great extractive force been obtained? Had the force thus obtainable not been sufficient, could not a hooked rod have been passed through the hole over the neck of the bottle? or by filling the bottle, through the hole drilled in its bottom, with plaster-of-Paris, first stuffing the neck with cotton wool, could not a firm handle have been fixed inside, and so all operative interference possibly averted? Many similar modes of action will, doubtless, suggest themselves to our readers.—*Rep.*]

12. *Greene and Macphail on Simple Methods of Reducing Dislocated Shoulder.*—In the *Lancet*, May

1881, pp. 769, 896, the following methods of easily reducing dislocation of the shoulder-joint are described. Mr. Chas. H. Greene directs as follows. 'Take firm hold of the elbow-joint (bent at a right angle) of the affected arm, raise it as nearly to the perpendicular as possible, and keep it there closely pressed against the acromion; next pass two or three fingers of the left hand with their palmar aspects outwards, underneath and behind the head of the bone, which is now pointing directly downwards below and outside the glenoid cavity of the scapula, until they reach the lower edge of the latter, and, having insinuated the fingers in some measure between them, by which means a fulcrum is formed, draw firmly and rapidly down the wrist with a sweep, and the head of the bone glides over the fingers, and slips into its place.' Mr. S. Rutherford Macphail's plan is thus carried out. 'The surgeon stands on the affected side of the patient, grasping the limb (left) in his right hand at the elbow-joint, placing the thumb of his left hand on the dislocated head of the humerus. Abducting the limb from the side, and making a fair amount of extension, he now calls away the attention of the patient from himself so as to relax the muscular system, rotates the limb externally, and aiding reduction by pressure of his thumb on the misplaced head of the bone.' If the limb be the right, then the operator's hands must be transposed.

13. *Reeves on a New Method of Treating Rectal Fistulæ.*—In the *Brit. Med. Jour.*, June 1881, p. 917, Mr. H. A. Reeves suggests that the fistula, after free division and careful vivification of both surfaces by scraping, should be closed by deep sutures. A case, in which this plan was carried out, was rapidly cured without the painful dressings usually employed.

14. *Griffin on Treatment of Compound Fractures and Wounds of Joints by Glycerine and Carbolic Acid.*—Mr. F. C. G. Griffin reports in the *Lancet*, June 1881, p. 985, a series of cases, both of compound fracture and opened joints, in which very satisfactory results followed the use of pads of lint, soaked in the glycerinum acidi carbolici of the British Pharmacopœia, without the use of antiseptic spray or any other elaborate preparation. Mr. Griffin regards it as of much importance not to disturb the layers of lint immediately covering and generally adherent to the wound, until the latter has quite healed.

RICHARD NEALE, M.D.

PATHOLOGY.

RECENT PAPERS.

1. POPOFF, L.—On the Results of Ligature of the Ureters and of the Renal Arteries in Animals in Relation to other Pathological Processes. (Virchow's *Archiv*, Vol. xxii, p. 40.)

2. SOTNITSCHEWSKI. — On the Condition of the Arterioles in Granular Atrophy of the Kidneys. (Virchow's *Archiv*, Vol. xxii, p. 209.)

3. ANREP.—The Cause of Death after Division of the Vagus Nerves in Birds. (*Verhandl. der Phys.-Med. Gesellsch. in Würz.*, Band viv, Heft 1 and 2.)

4. TALAMON.—On Hepatic Cirrhosis. (*Revue de Méd.*, April 1881.)

5. GOMBAULT.—The part played by Segmental Lesions in the Evolution of Parenchymatous Neuritis. (*Le Prog. Méd.*, No. 17, 1881.)

6. STRUMPELL.—On the Pathology of the Spinal Cord. (*Arch. für Phys., etc.*, x, 3.)

7. HANOT and GOMBAULT.—Absence of Jaundice in Complete Obliteration of the Ductus Choledochus. (*Le Prog. Méd.*, No. 18, 1881.)

8. BURDEL.—The Malarial Poison-Germ. (*Ibid.*)

9. NICATI and RICHAUD.—On the Biliary Cirrhosis of the Domestic Rabbit. (*Arch. de Phys. Normale, etc.*, 1880, No. 3.)

10. TALAMON, C.—On the Diphtheritic Fungus. (*Le Progrès Méd.*, Nos. 7 and 26, 1881.)

11. DEBOVE.—On Chyliform Effusions. (*Le Progrès Méd.*, 1881, No. 23.)

12. STRAUS.—On Amyloid Kidney without Albuminuria. (*Le Progrès Méd.*, 1881, p. 25.)

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1. *Popoff on the Results of Ligature of the Ureters and of the Renal Arteries.*—From what he has observed of pathological changes occurring in animals after ligature of both ureters, or of both renal arteries, Popoff believes that these changes have much in common; so that, if the kidneys (the changes in which after these operations are very different) be left out of count, it would be difficult to find any distinct difference between the two results. The results of these two operations may be given as follows. 1. The animals live in each case about the same length of time. 2. The chief symptom after each operation is the depression of the temperature, which is not here produced by the use of narcotics, since it occurs when they have not been administered. The subnormal temperature becomes more marked as time goes on; but, if only one renal artery be ligatured, the temperature rises again to normal in the course of the following day. 3. Along with this singular temperature, there is frequently to be observed a diminution in the rapidity of the pulse. 4. Vomiting and diarrhœa occur after both operations. 5. A comatose condition ending in complete coma is among the most frequent symptoms. 6. Convulsions, both clonic and tonic, were very often present after ligature of the ureters. Only in one case were convulsions observed after ligature of the renal arteries.

2. *Sotnitschewski on the Condition of the Arteries in Granular Atrophy of the Kidneys.*—The simultaneous occurrence of granular atrophy of the kidneys and hypertrophy of the heart has been long recognised, and while formerly the affection of the heart was considered as secondary, and the change in the kidneys as primary, at the present day, according to this writer, the renal cirrhosis is to be looked upon as produced by a primary affection of the vascular system. On account of the great interest which this question gives rise to, Sotnitschewski was advised by Professor von Recklinghausen to investigate all cases in which chronic interstitial nephritis was found after death. These observations were made upon the condition of the vessels of the pia mater, kidneys, spleen, liver, and lungs. The somewhat limited amount of material at his disposal did not enable the author to draw more than the following conclusions. 1. The changes in the small arteries, though they are present in most cases of interstitial nephritis, are not invariably found in connection with that condition. Out of seventeen cases investigated, arterial changes were absent in two instances, and it is interesting and of importance to observe that both these cases were examples of one variety of kidney affection, namely, glomerulitis. 2. The changes in the smaller arteries were in six instances combined with chronic endoarteritis of the larger vessels, but in six cases the affection of the larger vessels was absent. 3. Hypertrophy of the heart was not evident in three cases out of the seventeen, although in two

these thickening of the coats of the smaller vessels was well marked. These statistics do not, therefore, support the theory that the arterial changes are the result of cardiac hypertrophy.

J. GRAHAM BROWN, M.D.

3. *Anrep on the Cause of Death after Division of the Vagus Nerves in Birds.*—Almost all warm-blooded animals, without exception, die very speedily after division of both vagi. This fact is readily admitted, but, as to the cause of death, there is considerable difference. Traube, Friedländer, and others give, as the cause, a pneumonia consecutive on the paralysis of certain nerve-fibres. But, while pneumonia always occurs in mammals, this is certainly not the case in birds; and Blainville and Billroth assert that division of the vagi has, in birds, no effect on the lungs. Eichhorst has lately shown that in birds no consecutive pneumonia is ever observed, and he has brought forward the view that death from division of the vagi, in warm-blooded animals, is caused by paralysis of the heart from fatty degeneration. This degeneration he attributes to the division of the trophic nerves of the heart, not to the cardiac acceleration following division of the vagus; for, in prolonged atropin poisoning, he observes an equal acceleration, but unaccompanied by fatty degeneration. His experiments were mostly performed on birds, and, except the heart, he found no other organ altered. Dr. Anrep gives (*Verhandl. der Physik-Med. Gesellsch. in Würzburg*, Band xiv, Heft 1 and 2) the results of 21 experiments on pigeons and fowls, with his conclusions therefrom. Immediately, or very soon, after the operation, symptoms of dyspnœa appear, which last, as a rule, for 24 hours, after which the pigeons, more especially, become more cheerful and breathe more easily. The number of respirations sinks, after the operation, from 40 per minute to 10 or even 5; the reduction arising not merely from cessation of respiration, but also from great prolongation of inspiration with short expiration. The respirations rise to twenty, or thereby, per minute, after the first day; but, after five to seven days, the respirations again fall before death. The heart contractions are doubled in frequency, and remain so throughout. Shortly after the operation pigeons begin to pick up food, but no act of swallowing is observed; while fowls, on the other hand, take no food, but make constant attempts at swallowing. Vomiting is a constant symptom, and the gastric secretion is neutral or alkaline. Death was, as a rule, gradual, sudden only in three of the twenty-one cases, and was markedly similar to death from starvation, which similarity was strengthened by the *post mortem* appearances. The lungs were normal or œdematous at the edges. The heart showed more or less fatty degeneration, but never to an extent sufficient to account for death. The liver was atrophic and showed fatty degeneration, as did also the striated muscle of the body and the tissue of the stomach. The crop of pigeons contained numerous grains of corn, the stomach and intestine none. There was no trace of adipose tissue anywhere. Pigeons operated on and fed, and pigeons not operated on and starved, lost weight in equal amounts, although the former had the slight preponderance accounted for by the food found in their crop after death. The starved pigeons lived only forty hours longer than the others, and showed, on *post mortem* examination, precisely the same tissue-changes, the same fatty degeneration of the heart and other organs, the same absence of adipose tissue. Dr. Anrep notes that slight fatty degeneration is present in the hearts of normal pigeons and fowls. His conclusion is that the cause of death, after the division of the vagi in birds, is starvation, and that the fatty degeneration of the heart is the result of the inanition.

JAMES ANDERSON, M.D.

4. *Talamon on Hepatic Cirrhosis.*—From a careful study of three livers from patients who died of mitral disease, M. Ch. Talamon (*Revue de Méd.*, April 1881) has arrived at the following conclusions. 1. In liver-changes attending heart-disease, there is a lesion not secondary to but concomitant with the cardic affection. This is arteritis of the hepatic arterioles, dating probably from the same rheumatic attack as the heart disease. It is natural to attribute to this arteritis cases in which there is only fibroid thickening of the portal spaces with sclerosis. 2. This sclerosis, with that of the central intralobular vein and dilated veins, is the ordinary nutmeg-liver or simplest form of cardiac liver. 3. There is never any production of connective tissue around the central vein. 4. When there is any cirrhosis in cardiac liver it is around the portal ramifications, as in drunkard's liver. 5. There are thus two classes of disease with cardiac maladies—*a*. Concomitant lesions from arteritis; and *b*. Secondary lesions from embarrassment of the hepatic venous system. 6. The multilobular cirrhosis explains certain cases of cardiac ascites without œdema of the lower limbs; cases which derive no benefit from cardiac tonics. 7. A form of jaundice not described by authors is produced, resembling typhoid jaundice. It is due to inflammation of the biliary canals. Sometimes the liver resembles that of yellow atrophy; at others it has sclerosed patches including cell-*débris*.

GEORGE A. GIBSON, M.B.

5. *Gombault on the part played by Segmental Lesions in the Evolution of Parenchymatous Neuritis.*—Dr. Gombault (*Le Progrès Méd.*, No. 17, 1881) says that the characters of parenchymatous neuritis (Charcot) after section of a nerve are these: 1. In the same fibre, the lesion is uniform from the divided point to the peripheral termination of the fibre; 2. The axis-cylinder, rapidly interrupted in its continuity at many points, soon disappears. In certain chronic or subacute affections, M. Gombault has sought (*Arch. de Neurologie*, Nos. 1 and 2) to show the existence of another form having the following characteristics. 1. The lesion is discontinuous, affecting certain interannular segments, and respecting the parts in their intervals. 2. The axis-cylinder is preserved, both in the parts affected, as well as in the healthy portions. This latter segmental affection is met with in certain cases of disease. In two cases, one of acute ascending paralysis, and the other of diphtheritic paralysis, this lesion was demonstrated. In the former, both forms of lesion were equally represented; in the latter, the existence of the first described form was even doubtful. He considers the occurrence of this lesion as a consequence of subacute or chronic cases of spinal disease is more easily explicable, and better accords with our knowledge of the evolution of neuritis. He thinks that it possibly occupies an intermediate position between the healthy condition and the complete type of degeneration. He asks whether it can be regarded as clearly established that it is the lesion in diphtheritic paralysis. In convalescence from severe maladies, typhoid in particular, the nerve-fibres increase in size; and he suggests that this physiological process may occasionally overstep its proper limits, and pass into the segmental lesion.

6. *Strümpell on the Pathology of the Spinal Cord.*—Strümpell (*Arch. für Psych.*, Band x) has published the following cases.—CASE I. *Myelitis Dorsalis, progressing with the Symptoms of Spastic Spinal Paralysis.*—A young man, aged 25, probably in consequence of residing frequently in cold damp places, fell gradually ill with weakness of the legs, increasing rigidity of the muscles, exaggerated tendon-reflex and sensibility, and impaired function of the bladder. There were also frequent spontaneous strong convulsive twitchings in the legs, especially on the left side. The patient died with bed-sores. At the necropsy, Dr. Strümpell found lobular pneumonia of both lower lobes, advanced cystitis, and purulent pyelo-nephritis. The entire dorsal cord was the seat of diffuse myelitis, disease of Goll's columns, specks of grey degeneration in the outer parts of the posterior columns, intense disease of the lateral pyramidal columns, together with the lateral cerebellar tracts, and the anterior mixed lateral column zones. In the anterior columns was degeneration of the anterior, especially of the median border zone; in the anterior horns, were a few ganglion-cells, but numerous spider and granular cells, and striking dilatation of vessels. He thinks the lesion was not diffuse, but disseminated. There was ascending disease of the posterior columns, which formed a broad wedge in the lower cervical region; but, in the upper part, the thin end of this wedge was separated from the posterior gray commissure by a layer of normal tissue, so that the remaining healthy fibres, which had dragged Goll's fibres backwards, were to be observed in this region as short commissural fibres which ran out of the grey matter and back again. They were left uninjured in the upper cervical cord by the deeper position of the lesion, and, not belonging directly to Goll's columns, were not affected by the secondary degeneration. Near the secondary degeneration of Goll's columns, was an ascending degeneration of the lateral cerebellar tracts. The classical disease of the pyramidal lateral tracts passed downwards, but there was also a descending degeneration of the lateral cerebellar tracts, with alteration of the ganglion-cells of Clarke's columns. He thinks that this affection of the entire cerebellar tract is not to be accounted for by extension of the process from the pyramidal tracts, but is better explained by the lesion of the cord setting up an ascending as well as a descending secondary degeneration of the lateral cerebellar tracts. Just below the lesion there was, in the so-called 'bandelettes externes', a small localised degeneration of the posterior columns, as has been often observed, although not yet sufficiently explained. He adds that this case was at first regarded as spastic spinal paralysis, but afterwards recognised as transverse myelitis.—CASE II. *Hydromyelus and Systematic Degeneration af the Lateral Columns: Symptoms of Spastic Spinal Paralysis.*—A merchant, aged 35, had suffered from asthma since the age of five years. Three months after an attack, which occurred in his seventeenth year, he found gradually, that first the right leg, then the arm, finally also the left side of the body, became increasingly feeble; contraction and exaggerated tendon reflex supervened, and these symptoms, without any special alterations of sensibility or function of the bladder, led to a chronic paralysis, with spastic phenomena, and, finally, to a fatal termination. The case was regarded as a classical example of the spastic spinal paralysis of Charcot and Erb. The necropsy showed a great dilatation of the central canal of the spinal cord, commencing in the highest part of the cervical region, and passing down to become only a narrow slit, ending opposite the third lumbar nerve. In the upper dorsal region, a second dilatation lay on the left of that just described, situated between the third and sixth dorsal nerves. There was, amongst other changes, marked degeneration of the pyramidal and cerebellar lateral tracts. In the upper portions, the lateral and anterior columns showed slight degeneration, and the posterior columns, especially in the cervical and lower dorsal regions, were degenerated in patches. The patient had a strong hereditary predisposition to nervous diseases. Dr. Strümpell maintains that the symptoms of spastic spinal paralysis may be produced by diseases of the vertebral column itself. They are often produced by tumours of the cord; by certain modifications of multiple sclerosis of the brain and cord; by peculiar changes, the consequence of typhus fever; finally, by purely cerebral affections—for example, chronic hydrocephalus. He admits the propriety of the term spastic paralysis as a convenient expression for a certain well characterised group of symptoms. There are some cases in which the spasm is so much the more important factor, and the interference with motion is so much due to it, that he suggests for them the name of 'spastic pseudo-paralysis'. He regards it as improbable that disease of the lateral pyramidal columns can give rise to exaggeration of the tendon-reflex; above, all, other lesions of the cord, or, at least, in other systems, may give rise to secondary lesions of the lateral columns.

7. *Hanot and Gombault on Absence of Jaundice in Complete Obliteration of the Ductus Choledochus.*—MM. Hanot and Gombault (*Le Progrès Méd.*, No. 18, 1881), in examining a case of scirrhus of the pylorus, found that the ductus choledochus and cystic ducts were completely obliterated, as well as the hepatic artery and the branches given off by it in the hilus; the obliteration of the portal vein was not complete. There was no trace of jaundice. The suggested explanation is, that the obliteration of the hepatic artery, and great diminution in the calibre of the portal vein, produced such an insufficient supply of blood to the liver, that the amount of bile secreted was too insignificant for its retention to suffice for the production of jaundice. In the discussion which followed, M. Quinquaud said a patient of his own also had complete obliteration of the cystic duct and ductus choledochus, without jaundice.

8. *Burdel on the Malarial Poison-Germ.*—M. Burdel (*Le Progrès Méd.*, No. 18, 1881) has made numerous experiments, at first on sheep, then on himself, and afterwards on other persons, with dew obtained from marshy pools, or water containing microzoa, microspores, filaments, bacilli, etc., obtained from the air over marshes, and never observed any phenomena approaching the symptoms of true intermittent fever. The micro-organisms found in malarious places vary in genera and species, with the places, time of day, and season, in which they are observed.

9. *Nicati and Richaud on the Biliary Cirrhosis of the Domestic Rabbit.*—MM. W. Nicati and A. Richaud (*Arch. de Physiol. Norm.*, etc., 1880, No. 3) say that spontaneous closure of the ductus choledochus is not uncommon in rabbits. The cirrhosis which results is similar to that produced in guinea-pigs by tying the bile-ducts. But the hypertrophy of the liver does not occur, and the white specks in

its substance are absent. In the dilated ducts are sacculated portions containing gregarinæ, which probably find their way in from the intestine, and set up inflammation of the bile-passages. In this way arise catarrh of the ducts, shedding of epithelium, and the formation of a plug by the union of this shed epithelium with the entozoa. The walls of the ducts are filled with embryonal tissue, which is the starting point of a proliferation of tissue throughout the liver; thence the cirrhosis. In other cases, the central veins are the points of departure of this change.

10. *Talamon on the Fungus of Diphtheria.*—Dr. Ch. Talamon (*Le Prog. Méd.*, Nos. 7 and 26, 1881) has described what he supposes to be the specific organism of diphtheria, which differs essentially from the *zygodesmus fuscus*, or *Tilletia Diphtherica* of Letzerich, or the microsporon of Klebs. He found it in the false membranes obtained from the fauces or trachea of eight cases. The mycelium consists of jointed tubes, two to four or five one-thousandths of a millimètre in breadth, which bifurcate in a characteristic manner, the bifurcation resembling a lyre or a tuning-fork. The spores are of two kinds—round or oval, and rectangular. The rounded forms are spores of germination, which, by elongation, form the joints of the mycelium. The rectangular spores are the conidia and are characteristic. They are one to two, up to seven or eight one-thousandths of a millimètre in width, and five to six, up to ten or fifteen-thousandths of a millimètre in length. He inoculated with this fungus a number of animals, all of which died, and the characteristic spores were found in the various cavities of the body. In four pigeons local inoculation of the fungus caused a false membrane in the fauces. Subsequently, he procured a cat with three young kittens, and put them in a basket which had been previously occupied by the rabbits which had died after inoculation. The three kittens all died with purulent nasal catarrh and ophthalmia; the mother cat became ill, coughed, and refused to eat, but recovered. The kittens all showed well marked false membranes in the fauces, pharynx, and larynx, as well as in the trachea and bronchi. These false membranes contained the rectangular spores; the blood was quite free from these organisms; the spores obtained from false membranes removed six hours after death refused to germinate.

11. *Debove on Chyliform Effusions.*—M. Debove (*Le Prog. Méd.*, 1881, No. 23) has lately observed the following case. An old man, aged 63, presented all the signs of abundant left pleural effusion, with marked displacement of the apex. A few days after admission, imminent asphyxia called for paracentesis, but before more than a quart of fluid was withdrawn, the patient died of syncope. The fluid withdrawn was white, and, under the microscope, turned out to be a fatty emulsion containing no more leucocytes than can be seen in an ordinary serous exudation. The necropsy showed about two quarts more of the same fluid in the thorax; no trace of communication with the mediastinum; thick stratified false membranes on the pleural surfaces. M. Debove remarks that similar effusions have been described in the peritoneum and tunica vaginalis as well as in the pleura. He regards the fluid, therefore, not as true chyle, but as chyliform. With regard to these effusions in the pleura, they present the physical signs of effusion generally, with, as is usual in purulent effusions, absence of whispering pectoriloquy.

12. *Straus on Amyloid Kidney without Albuminuria.*—M. Straus (*Le Prog. Méd.*, 1881, No. 25) has brought the following case before the Société Médicale des Hôpitaux. The patient had been in various hospitals for the past three years with right-sided pleurisy of tubercular character, and finally died in the Hôpital Ténon of pulmonary phthisis. The urine had been often examined and was more albuminous. At the necropsy, there was found amyloid disease of the kidneys, spleen, and intestine. The kidneys were not enlarged; iodine brought out the amyloid reaction in brown streaks, more numerous in the medulla, and principally affecting the vasa recta of the pyramids, as was shown by the microscope. Most of the glomeruli and afferent arteries were intact; and M. Straus explained the absence of albuminuria by the special distribution of the lesion, which left unaffected the parts concerned in secretion. (See LONDON MEDICAL RECORD, 1878, p. 325.) ROBERT SAUNDBY, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. BENICKE, F.—Hot-water Vaginal Irrigations in Diseases of Women. (*Berl. Klin. Woch.*, den 20 Juni 1881.)
2. FEHLING.—On Intermenstrual Pain. (*Archiv für Gynäk.*, Band xvii, Heft 2.)
3. COLLET-Y-GURGUI, J.—Ovarian Pregnancy from an Anatomico-pathological Stand-point. (Stuttgart, 1880.)
4. HAMILTON, A.—Pilocarpin in Eclampsia Puerperalis. (*Brit. Med. Jour.*, April 2, 1881.)
5. KORSCH.—On the Mobility of the Pelvic Joints. (*Zeitsch. für Geburtsh. und Gynäk.*, Band vi, Heft 2.)
6. KÜSTNER.—Further Contribution to the Exact Internal Measurement of the Pelvis in the Living Subject. (*Deutsche Medizin. Woch.*, 1881, No. 18)
7. LEBEDEFF.—Modification of Simon's Speculum. (*Archiv für Gynäk.*, Band xvii, Heft 1.)
8. LEWIS, E. S.—On a Case of Retained Menstrual Fluid. (*Proceedings of Louisiana State Med. Soc.*, 1880.)
9. MEKERTTSCHIANTZ.—Central Laceration of the Posterior Lip of the Vaginal Portion of the Cervix Uteri. (*Centralb. für Gynäk.*, den 25 Juni, 1881.)
10. PATENKO.—On the Nerve Endings in the Uterine Mucosa. (*Verhand. der Gesells. Russischer Aerzte in Petersburg*, 1880, 1 Lieferung.)
11. ROSENSTEIN, JULIUS.—Retro-Uterine Hæmatocele. (*Centralb. für Gynäk.*, 25 Juni, 1881.)
12. SCHWING, K.—Pregnancy and Labour Complicated with Enormous Primary Cancer of the Liver. (*Ibid.*)
13. SIMPSON, A. R.—Clinical Lecture on a Case of Cæsarean Hystero-oöphorectomy, or Porro's Operation, with Remarks. (*Brit. Med. Jour.*, June 11th and 18th, 1881.)
14. WING, E. CLIFTON.—Unnecessary Surgical Operations in the Treatment of Diseases of Women. (*Boston Med. and Surg. Jour.*, May 1881.)

1. *Benicke on Vaginal Irrigations in Diseases of Women.*—Dr. Benicke recommends vaginal irrigation by hot water from 37 to 40 deg. Reaumur (115 to 122 deg. Fahr.) In frequency the irrigations vary from once daily to twice every hour, to suit the emergencies of the case. The injections are administered with the patient lying on her back and the buttocks raised. The special indications for the above treatment are—1, subinvolution of the puerperal uterus; 2, chronic metritis; 3, exudation or remains of exudation round the uterus.

4. *Hamilton on Puerperal Convulsions.*—M. J. E. aged 22, domestic servant, primipara, previously

healthy, was suddenly seized with convulsions. When Mr. Hamilton first saw her she was in violent general convulsions, which had lasted two hours. She was in the sixth or seventh month of pregnancy; os uteri rigid and undilatable; urine loaded with albumen. Mr. Hamilton injected, hypodermically, six hours after her seizure, fifteen minims of a two per cent. solution of pilocarpin. This was followed in about two minutes by very profuse salivation and perspiration. The convulsions ceased, and strong uterine contractions set in. After an interval of an hour she had seven fits in quick succession. A second injection, two hours after the first, was given. The salivation following this was so copious as to threaten suffocation. Although the convulsions became weaker and less frequent, the breathing was so much embarrassed as to make the patient's recovery almost hopeless. Pains, however, became stronger and more frequent, the fœtus being expelled ten hours after the last injection. The patient remained unconscious for two days, and then recovered rapidly.

8. *Lewis on a Case of Retained Menstruation.*—The patient, aged 19, had never menstruated. With the exception of discomfort produced by abdominal enlargement, had enjoyed fair health. Four years previously, her urine had been drawn off on account of retention. Examined in the dorsal decubitus, the abdomen was found occupied by two tumours, evident on inspection and palpation. The large one in the median line was pyriform, and reached to two fingers' breadth above the umbilicus, its size being that of a seven months' gestation. The other was of the size of a turkey egg, on a level with the umbilicus to the left, and closely connected with the larger tumour, a sulcus separating the two. Fluctuation was present in both tumours. Vaginal examination disclosed an imperforate hymen stretched to the size of a silver dollar, tense and bulging, and of a purplish blue colour. The diagnosis was menstrual retention with regurgitation into the left Fallopian tube, producing the smaller tumour. The hymen was punctured with the finest needle of the aspirator, and six ounces of a tarry fluid removed. On the following days (May 14, 15, and 16) as much more each time was abstracted without visibly altering the bulk of the uterus. On the 17th, the flow of the now thicker fluid being very slow, the largest trocar in the aspirator case was used, and thirty-three ounces withdrawn. The opening made by the trocar allowed the escape of fluid after its withdrawal. On the 18th, there was a most unpleasant odour from the discharging fluid. The patient was pale; pulse 120, temperature 102.5 deg., with tenderness over the abdomen. She had been delirious in the night. Decomposition had taken place in the fluid from the admission of air, and septicæmia had resulted. A circular piece of the hymen was now removed, and about two quarts of offensive menstrual fluid escaped. The cavity of the uterus was then sponged out with weakly carbolised tepid water, until the fluid came away perfectly clear. Twenty-four grains of sulphate of quinine were given, in four-grain doses hourly. Five hours later, the temperature was 100 deg., and the general condition satisfactory. May 19, the smaller tumour remained unaffected. May 20, there was acute pain; general peritonitis. May 21, she was better. During the following two weeks the fever remained. At the end of the first week, the abdomen up to the umbilicus was dull on percussion and hard from exudation. The exudation slowly disappeared. June 15, the smaller tumour was aspirated by the finest needle, and four ounces of menstrual fluid withdrawn: it was unchanged and colourless. The tumour diminished in size, but, in a week's time, attained its former development. It was aspirated a second time with a larger trocar, a sanguineo-purulent fluid being removed. Dr. Lewis injected a little carbolised water into the sac. The septicæmia continued, complicated with diarrhœa. Under chloroform the sac was cut into, the cavity washed out with carbolic solution, and a tent introduced. Carbolic solution was injected daily. Under this treatment she rapidly improved, and was convalescent in two months after the first aspiration of the hymen. The fistulous opening resulting, continued to discharge for several weeks, finally closing. She recovered perfectly, and menstruates regularly without pain.

10. *Patenko on the Nerve-Endings in the Uterine Mucosa.*—Patenko found in the membrana propria of the uterine glands, close to the epithelioid lining, a fine network of thin non-medullated nerve-fibres, which apparently branched out from the nervous network in the muscular tissue. Still finer branches went inwards from the above named network between the cells of the epithelioid lining, and lost themselves partly here, partly in the glandular epithelium.

13. *Simpson on Porro's Operation.*—Mrs. B., aged 24, rickety, had had several craniotomies and still-born children. The internal conjugate diameter measured 2¼ inches. She was anxious to have a living child, and accepted the proposition of delivery by Porro's operation. The operation was performed under carbolic spray. The abdominal incision was 14 centimètres long. The child was extracted while the uterus was *in situ*. The child was living, and at once began to cry. The uterus contracted on the placenta, which was not removed. A stout piece of whipcord, made antiseptic, was passed round the broad ligaments and cervix uteri, drawn tight, and firmly knotted. The broad ligaments and Fallopian tubes were then ligatured, as well as the isthmus uteri. The pedicle contained three ligatures; one controlling the ovarian arteries and venous plexuses on each side, a third embracing the isthmus uteri and uterine arteries. The uterus was then amputated at a distance of 1.5 centimètres above the ligatures. The whipcord ligature was removed. There was no bleeding from the stump. The ovaries were cut away last, and the whole surface of the stump secured with the Paquelin cautery. There was no escape or exposure of the intestines. The peritoneal cavity was carefully sponged out. In sponging the pelvic cavity, the central ligature was loosened, so the uterine stump was transfixed and ligatured again. The cautery was reapplied. The abdominal incision was closed with eight silkworm gut and four horse-hair sutures. The patient died on the fourth day after the operation. The *post mortem* examination showed a considerable quantity of serous exudation and lymph in the abdomen, which was distended. The abdominal wound was healthy looking, and adhesion had taken place along the whole line of incision. The intestines were matted to the pedicle with recent lymph.

14. *Wing on Unnecessary Gynæcological Operations.*—In this paper, Dr. Wing discusses the cases where the following operations are frequently performed, but in many instances unnecessarily. 1. The operation for ruptured perinæum; 2. Division of the neck of the womb; 3. The operation for restoring the neck of the womb where this has been torn (Emmet's operation); 4. Curetting of the

uterine cavity; 5. The operation upon the anterior vaginal wall for prolapse of this portion and cystocele. He says it is the exception, not the rule, to find in women who have borne children a perinæum perfectly intact. Not only are the parts more relaxed and patulous, as the result of the distension in child-bearing, but there is more or less rupture of the vaginal outlet during parturition, even if the perinæum proper be not torn; and if the condition found in those who have not borne children be assumed to be the proper condition for all women, then an operation may easily be found 'necessary' in practically every woman who has borne children. He has not found that patients with slight perineal laceration have thereby suffered the direful symptoms, which have been described as accompanying such lesions. He remarks that it is questionable if any other operation of modern surgery has been quite as thoroughly overdone and abused, as this has been. That cases do occur where the operation is indicated and advisable, he believes; but he is convinced they are very rare. In the last seven years, he has performed the operation but twice. He considers that, in a very large number of cases, rupture of the cervix with eversion requires no treatment at all. The lesion is innocuous. As regards the curette, he says that now-a-days, if a patient present herself with a simple uterine catarrh and a history of increased uterine flow (which is but natural in such cases), and particularly if she have borne children, and have in consequence an invitingly open uterine canal, perhaps the first thing the physician thinks about is the curette. He believes of the operation upon the anterior vaginal wall for prolapse and cystocele, as he believes of each of the other operations considered, that in its proper place it is capable of much good, but that at present it is done much oftener than is necessary or best. [Dr. Wing, we think, might have attacked with more reason the *prurigo secandi* of performing serious operations, such as abdominal section for the removal of the ovaries in dysmenorrhœa or menorrhagia, the so-called 'entire removal' of the uterus, as suggested by Freund in cancer of the uterus, and the removal of the uterus for fibroma, when the patient's life is not in danger. These are being more and more frequently performed, especially in Germany, and the published results do not justify the operations.—*Rep.*] FANCOURT BARNES, M.D.

SYPHILOGRAPHY.

RECENT PAPERS.

1. PARROT.—The Diagnosis of Hereditary Syphilis, in some of its Forms. (*Ann. de Derm. et de Syphil.*, 1881, No. 1, p. 113.)

2. ERB.—Tabes and Syphilis. (*Centralbl. für die Med. Wissen.*, 1881, Nos. 11 and 12.)

3. FINLAYSON.—Case of Hæmatoma of the Pericranium in a Child, simulating Hydrocephalus, and associated with Constitutional Syphilis. (*Glasgow Med. Journ.*, March 1881, p. 190.)

4. DRYSDALE.—The Duality of the Chancre. (*Med. Press and Circular*, March 16, 1881.)

5. BULL.—Some Points in the Pathology of Ocular Lesions of Cerebral and Spinal Syphilis. (*Amer. Journ. of the Med. Sciences*, April 1881, p. 382.)

6. MACKENZIE.—A Case of Disseminated Syphilitic Meningitis. (*Lancet*, April 9, 1881.)

7. O'CONNOR, B.—A Case of Syphilitic Psoriasis of the Head and Face. (*Ibid.*, April 23.)

8. WATSON, SPENCER.—Primary Syphilitic Ulcer of the Lower Eyelid. (*Brit. Med. Journ.*, May 7, 1881.)

9. OWEN.—Hard Chancre of the Lower Lip. (*Lancet*, May 7, 1881.)

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1. *Parrot on the Diagnosis of Hereditary Syphilis in some of its Forms.*—The diagnosis of infantile syphilis is often difficult, both on account of the multiplicity of forms which it may assume, and also because it is often necessary to make a retrospective diagnosis (*Ann. de Derm. et de Syphil.*, 1881, No. 1, p. 113). Age is of great importance, as certain lesions only show themselves at certain periods of life. It is especially, however, the seat of the affections that has to be taken into consideration. The lesions generally appear on the thighs, the buttocks, the lower lip, and about the chin and angles of the eyelids. One sign, to which much importance has been attached, but which, according to M. Parrot, is often wanting, is the bistre tint of the skin, the cachectic look, and the senile aspect of the face. These are sometimes seen in syphilitic infants, but are most frequently due to malnutrition. All the eruptions due to inherited syphilis have more or less of a violet tint. An eruption due to malnutrition is of a more delicate rose colour. The syphilides may be bullous, macular, papular, or vesico-pustular. Pemphigus is the earliest, for it sometimes appears at the sixth or seventh month of intra-uterine life. It is mostly observed at birth, when it is seated on the palms and soles. The contents of the bullæ are turbid or purulent. In children two months old, pemphigus may appear on the trunk and around the axillæ. Such an eruption is not syphilitic. The larger dimensions of the bullæ, the transparency of their contents, and the rapid desiccation, are sufficient to distinguish it from the syphilitic form. Macular and papular syphilides are similar to the corresponding affections in adults. The vesico-pustular eruption is the rarest and latest. The diagnosis is difficult. It begins as a papule surmounted by a vesicle, which quickly bursts, or as a red patch on which a bulla developes and rapidly ulcerates. The affection attacks the abdomen by preference. All these syphilides have a tendency to ulcerate, in which case the ulceration may remain limited to the syphilitic lesion, but sometimes it extends more widely. When the ulcers progress very rapidly, and when they extend to the neck, tuberculosis is to be feared.

5. *Bull on the Pathology of Ocular Lesions of Cerebral and Spinal Syphilis.*—Dr. C. S. Bull contributes a paper on this subject, illustrated by cases, to the April number of the *American Jour. of the Med. Sciences*. According to recent statistics, cerebral syphilis appears to be most frequent between the third and the eighteenth year after infection; and of all the symptoms of this variety of syphilitic lesion, there are probably none so frequent as those of paralysis of the cranial nerves. The most common of these are paralysis of the motor oculi, followed, in order of frequency, by paralysis of the optic, auditory, and facial nerves, and, at a longer interval, by paralysis of the olfactory and trifacial. The author believes that ocular paralyses are frequently the initial symptoms of cerebral syphilis. Of course, there are instances when the paralysis is only the consequence of a peripheral lesion, as in cases where only one ocular muscle is paralysed. But such cases are excluded from consideration in this paper. Visual troubles in cerebral syphilis are not so common as paralyses of the motor nerves. They may be due either to lesions of the cerebral

parenchyma, or to meningeal or osseous lesions at the base of the brain. The lesions may be inflammatory, or may consist in the growth of gumma. The lesions may be in the vicinity of the sella turcica and optic chiasma, or far back near the centres of origin of the optic nerves. In either case, the optic nerves have been found compressed, degenerated, and atrophied, owing to meningeal exudations, gummata, or the cicatrices of gummata. Another cause of defective vision is a primary atrophy or sclerosis of the optic nerve-fibres themselves, or, more frequently, a secondary simple sclerosis of the nuclei of origin, from sclerosis either of the neighbouring brain-substance or of the spinal cord. In these cases the opthalmoscope shows two different conditions: one of optic neuritis, the papillitis varying in appearance from simple inflammation, with slight œdema and swelling through all the stages, up to true 'choked disc', with or without hæmorrhages, and ending in what is called inflammatory atrophy, with ragged and indistinct outlines; the other, a simple white atrophy of the disc, with no signs of any preceding inflammation, the outline of the papilla being quite clear and distinct. Dr. Bull also remarks on the chronicity of optic neuritis in some cases without progressive failure of vision. Thus, a patient will come with a history of syphilis, and a complaint that his vision has been failing for some months, but that lately he has not noticed any change. The ophthalmoscope shows optic neuritis, or neuro-retinitis, with more or less swelling and œdema of the nerve and retina, but without the signs of true choked disk. One such case was under the observation of the author for nearly three years, during which time there was no demonstrable change in the fundus or in the vision. Dr. Matthewson of Brooklyn has reported several such cases. Optic neuritis may exist alone, or may be accompanied by paralysis of one or more of the extrinsic muscles of the eye; and special attention has been called by Dr. Hughlings Jackson to its connection with attacks of unilateral epilepsy. Dr. Bull strongly urges the use of the ophthalmoscope, in any case where a syphilitic patient presents symptoms which may be referred to cerebral lesion. Among the five cases reported, is one in which optic neuritis appeared in the right eye five months after infection. Under treatment, vision slowly improved for a time, but finally atrophy resulted. A year afterwards, examination showed absolutely no perception of light, a dirty grey atrophy of the disk, except on the temporal side, where it was brilliantly white, and the pupil moderately dilated and almost immovable.

6. *Mackenzie on a Case of Disseminated Syphilitic Meningitis.*—Notes of this case were read before the Medical Society of London on March 28th (*Lancet*, April 9th, 1881). The case was brought forward to illustrate the value of mercury in late syphilis. A woman with a tertiary syphilitic eruption came under treatment for tremor of the hands and feet, stiffness of the hands and fingers, and pain in the left side of the head. Iodide of potassium in twenty-grain doses, alone and in combination with perchloride of mercury, cured the eruption, but did not influence the nervous symptoms; which, however, rapidly subsided under mercurial inunction and the perchloride internally pushed to salivation.

ARTHUR COOPER.

THE CONGRESS OF GERMAN SURGEONS.

II. Clinical Cases.

The members of the Congress assembled on the mornings of April 7th, 8th, and 9th, from ten to one o'clock in the newly built operating hall of the Royal Clinic.

Case of Trephining of the Skull: Recovery.—Dr. von Bergmann (Würzburg) shewed this case. He said that, as the greatest danger in complicated fractures of the skull, apart from the injury of the brain and cerebral œdema in acute meningitis, lay in the open treatment of the wound, he recommended that the edges of the wound should be immediately brought together and united. He had operated in this way on five cases; the last being the patient now exhibited, who, in November 26 of last year, had fractured his skull and deeply injured his brain by a fall from a builder's scaffold. Four hours after the closure of the wound, paralysis of the left hand and arm and of the left facial nerve set in; these symptoms, however, gradually improved after December 14th; and, at the time of the meeting, muscular power was completely restored in the left arm, with the exception of some uncertainty in intended movements.—Dr. Baum (Dantzig) advised that healing by the first intention should not be forced, on account of the danger of the formation of abscesses in cases of concussion of the brain.—Dr. von Bergmann said that abscess would be avoided, if its cause, inflammation, were restrained; and this was only to be done by closing the cerebral wound as quickly as possible: of course with careful drainage.

Resection of Tumours of the Cranial Bones and Cerebral Membranes.—Dr. von Langenbeck shewed a woman aged 60, who had been operated on in the Berlin hospital in 1868, 1874, 1878, and 1879, on account of a cancroid in the region of the right frontal protuberance, and returned last winter with a recurrence of the disease, which now extended to the supra-orbital arch. The tumour was extirpated in February last, when not only the diseased bones were removed, but the dura mater, so far as it was affected, was cut away by scissors. A small portion of the dura mater, which had become adherent to the pia mater, was left to be afterwards destroyed by the cautery. The wound was treated with antiseptic precautions, without spray. When the dressings were changed for the first time, the whole wound was found to be filled with a firm blood-clot, which was left untouched. After a few days, the clot broke up, and the whole of the diseased portion of pia mater, with a layer of brain-substance, was thrown off. The brain was seen to be granulating at the bottom of the wound. The patient had no symptoms of paralysis after the operation; her consciousness had remained perfect, and her general health good; and the intense headache, which had driven her to seek relief by operation, had not returned. There was no indication of a return of the disease in the wound, which was still granulating. Dr. von Langenbeck referred to a case in which he had extirpated a medullary sarcoma from the forehead in 1877, unfortunately without success; also to a case of Volkmann's, reported by Genzmer in 1877, which was fatal, in consequence of the entry of air into the longitudinal sinus; and to a case related to the Surgical Congress in 1879 by Dr. Thiersch, in which a cancer of the scalp and cranium was extirpated by means of Canquoin's paste. He said that, in the removal of tumours from the skull, hæmor-

rhage could be reduced to a small amount by first lightly enveloping the head in a *mitra Hippocratis*, and then applying over this a starched bandage, the turns over the forehead and occiput being drawn tight.

The Treatment of Old Fractures of the Vertebræ.—Dr. Küster (Berlin) said that the efficacy of Sayre's plaster-of-Paris bandage in cyphosis had suggested its use in fractures of the vertebræ. He had used the plaster jacket in four such cases. In two cases of fracture of a lumbar vertebra, with symptoms of paralysis of the bladder, rectum, and lower limbs, it had been applied with good result; while no improvement followed in a case of fracture of the third dorsal vertebra. In a case of fracture of the middle part of the dorsal spine, with the formation of an angular projection, and complete paralysis of both arms and legs, and also of the bladder and rectum, Dr. Küster had broken up the callus under narcosis, and applied extension (up to twenty pounds); the result being a complete disappearance of the paralysis.—Dr. von Langenbeck had applied the plaster-of-Paris bandage in a recent fracture of the dorsal spine in 1862; it was, however, not well borne, and up to the present day he had obtained better results by placing the patient on a water-bed and applying extension by weights.—Dr. Bardeleben (Berlin) was not an opponent in general of Dr. Küster's plan of treatment; but he would recommend that the plaster bandage should not be applied immediately in cases of fracture of the spine, as such fractures were always complicated with other injuries; and it might happen that symptoms of paralysis, which were even strongly marked on the first day, might disappear in a short time without any treatment.—Dr. Sonnenburg (Berlin) had attempted, in the Berlin Clinic, to apply the plaster-of-Paris jacket, without narcosis, in the case of a child suffering from disease of the cervico-dorsal region of the spine. During suspension, difficulty of breathing suddenly set in; and the child died in an hour and a half, in spite of tracheotomy and artificial respiration. At the necropsy, along with disease of the lower cervical and first dorsal vertebræ, there was found to be a large abscess extending into the posterior mediastinum; it had not burst. Probably this abscess had caused death by pressing during the suspension, on the trachea, and on the pneumogastric and phrenic nerves. The spinal cord showed no change.—Dr. Busch (Bonn) had become very cautious in the use of suspension in spondylitis. Forcible extension led to the formation of abscesses. He had had under his care a case of fracture of the spine with disturbance of motion and sensation, in which recovery took place under suspension and the plaster-of-Paris bandage.—Dr. König (Göttingen) said that the plaster bandage would probably only come into use in slight cases of fractured spine. In severe cases, it would be dangerous to suspend to any important extent.—Dr. von Langenbeck treated Pott's disease with the plaster jacket only in cases where the children could be examined daily, and the danger of bed-sores be thus averted. Chloroform was to be recommended in the application of the bandage, as it prevented violent movements on the part of the children and thus obviated accidents. The plaster jacket was not suitable for the treatment of scoliosis. For this, he used only Taylor's bandage.—Dr. Wagner (Königshütte) advised caution in the application of the gypsum jacket in recent cases of fractured spine, lest the blood extravasated into the spinal canal should undergo compression. In one case, he had seen paralysis appear on the application of the bandage, which was, therefore, immediately removed. In four subsequent cases, he had allowed fourteen days to elapse before applying the plaster bandage, and recovery had taken place in another four weeks.—Dr. Busch (Bonn) recommended the plaster jacket in the treatment of scoliosis. Bed-sores could be prevented by a pad of cotton-wadding on each side of the projection.—Dr. Lücke (Strasburg) spoke of the advantages of the plaster jacket in dispensary practice, on account of its cheapness.—Dr. Schönborn (Königsberg) used in private practice only the felt jacket with a steel splint; in dispensary practice, the immovable plaster jacket was alone employed.—Dr. Schede (Hamburg) said that the difference in the size of the patients during the application of the plaster jacket and on its removal spoke in favour of the apparatus. In fractures of the vertebræ, recovery was obtained through extension of the bones and not of the ligaments.—Dr. von Langenbeck did not disapprove of the poroplastic jacket, but only of its use in patients who could not be seen daily. In the application of the poroplastic apparatus, which must be warmed to 140 deg. Fahr., several patients had been severely burned.—Dr. König recommended, in order to prevent this, the slow softening of the felt in a warm water bath.

Extirpation of Floating Kidneys.—Dr. von Langenbeck (Berlin) showed two individuals in whom he had removed the right kidney. One was a woman, belonging to the labouring class, who had suffered from severe pain, and whose mind had consequently become affected. The other was an apothecary, who had incontinence of the pylorus, which had gradually become developed through the pressure of the kidney on the duodenum. In both cases an incision was made through the abdominal wall, along the outer edge of the rectus muscle, and the outer layer of the mesocolon was divided; the inner layer being left intact, on account of the danger of wounding branches of the mesenteric artery. The secretion of urine was diminished in both cases for a few days after the operation, but afterwards became normal; a little albumen was present, but entirely disappeared. Both patients were relieved of their sufferings.

Nerve-Stretching in Disorders of the Spinal Cord.—Dr. Langenbuch showed a patient, in whom Dr. Westphal had diagnosed degeneration of the anterior and lateral columns of the spinal cord. The right sciatic nerve was stretched in the central more than in the peripheral direction. The patient was relieved of his tottering gait, and of anæsthesia of both legs; the latter disappeared a few hours after the operation, which was performed three weeks before the meeting, and had not returned. Dr. Langenbuch also showed a patient who had been cured of frequently recurring attacks of epilepsy, by stretching the median nerve.—Dr. Credé (Leipsic) referred to a patient shown at the Congress in 1880, in whom permanent cure of neuralgia had followed stretching and section of the third division of the fifth nerve.—Dr. von Langenbeck asked whether it was thought that the stretching should be made in a peripheral as well as in a central direction.—Dr. Langenbuch considered that the question was not yet settled. He always recommended that stretching of the peripheral portion of the nerve should be avoided, at least in the case of the sciatic nerve, the branches of which, from their anatomical arrangement, might be easily torn.—Dr. Neuber (Kiel) mentioned a

case of reflex epilepsy, which had been cured by stretching the median nerve. On the other hand, permanent paralysis had followed stretching of the sciatic nerve in a case of sciatica.—Dr. Langenbuch had not seen paralysis in twenty-four cases, in which the sciatic nerve had been stretched.

New Illuminating Apparatus. — Dr. Michael (Hamburg) described an apparatus, the construction of which had arisen from the idea that it might in many cases be advantageous to possess a means of direct illumination without the aid of lenses or reflectors. The light was supplied by exhausted glass globes containing powdered phosphorescent substances; these were lighted up by aluminum electrodes, which were connected with a Ruhmkorff's inductor. The light could be increased in proportion to the strength of the inductor; and with even a weak current it was sufficient to enable small writing to be read when held close; and a stronger light enabled it to be read at a greater distance. Dr. Michael called the instrument the psychrophore (cold light); and said that in its present form it was capable of illuminating parts inaccessible to daylight, in operations in the abdominal cavity or the vagina. He hoped also to be able to render it useful for cavities with narrow confines.

Extirpation of the Bladder and Prostate.—Dr. Glück (Berlin) said that, after extirpation of the urinary bladder in dogs, the animals survived in all cases in which the ureters were united by suture to the abdominal wall or to the urethra. Union of the ureters to the rectum was followed by death from urinary infiltration, and passage of fæces into the abdomen. He recommended extirpation of the bladder in cases of severe and incurable disease in the human subject.

Cancer of the Vertebræ.—Dr. F. Busch (Berlin) described the case of a patient who had a small prominence on the spinal processes of the lower dorsal vertebræ, which gave the impression of incipient spondylitis. He died in an acute attack of asphyxia; the cause of death, as shown at the necropsy, being embolism of the pulmonary arteries. A cancer of considerable size occupied the bend of the pancreas, and was apparently the primary tumour. Metastatic nodules arising from this were found only in the vertebræ and ribs. An especially interesting fact was, that one of the vertebræ (the eleventh dorsal) was reduced by the cancer to the thickness of five millimètres. Transverse section of a metastatic nodule in a rib showed the normal contour of the rib lying within the white medullary mass; proving that there was no expansion of the bony tissue by the tumour.

Apparently Mycotic Disease of the Lower Jaw.—Dr. F. Busch (Berlin) showed the half of a lower jaw having a large ulcerative defect, extending nearly as far as the angle. At the angle, the bone was much thickened: beyond this, it became thinner, and the condyle was normal. On microscopic examination of sections of the thickened bone there were found numerous opaque foci, which Dr. Busch regarded as being very probably mycotic. They consisted of a number of small glittering corpuscles, enveloped in fine fibrous network: the addition of solutions of potash or soda rendered the network transparent and the corpuscles very distinct. He said that, although these corpuscles appeared to be of a mycotic nature, there was no certain proof that they were so. They were not identical, in any case, with the fungi which caused the disease in the jaws of cattle, known as actinomycosis.

Typical Fracture of a Vertebræ by Muscular Action.—Dr. Schede (Hamburg) showed a preparation taken from the body of a man who, while jumping head foremost into the water, threw his head backwards with all his might in order to avoid striking it against the ground. Only three cases of fracture of vertebræ from muscular action were to be found in medical literature; and in all the cases the cause was the same, and the vertebra fractured was the fifth dorsal.

The following communications were also made :—

Dr. Zeller (Berlin): Prophylactic resection of the trachea, with demonstration.

Dr. von Lesser (Leipsic): Local anæsthesia.

Dr. P. Bruns (Tübingen): Some improvements in the artificial larynx.

Dr. Schwalbe (Magdeburg): The cirrhotic action of alcohol, and its value in surgery.

Dr. Rildinger: Cure of two cases of ununited fracture of ulna by catgut suture.

Dr. Rose (Berlin): Cerebral abscess, cured by trephining, and removal of a fragment of a knife from the brain.

Dr. Rose: Larynx twelve years after removal of a tumour below the vocal cord.

Dr. Langenbuck: Removal of four large pieces of ribs and evacuation of 8,000 cubic centimètres of pus.

Dr. B. Fränkel (Berlin): A modification of Voltolini's rhinoscope.

Dr. Hirschberg (Berlin): Three cases of removal of splinters of iron from the eye by the electro-magnet.

A. Henry, M.D.

REVIEWS.

A Practical Treatise on Nervous Exhaustion (Neurasthenia), its Symptoms, Nature, Sequences, Treatment. By George M. Beard, A.M., M.D., p. 193, New York, 1880.

Not the least striking feature of this book is the extreme modesty displayed by its author. He only compares himself by implication to Copernicus, Aristotle, Bacon, Franklin, Columbus, and Darwin, and expresses the certainty of his eventual recognition by mankind, which will in time confer the 'crown of science' upon him 'for organising it' (p. xxiii). After this, we cannot be surprised to hear that 'the capacities of the five senses of man are so meagre that they practically shut him out from Nature, and that the great natural forces, as light, heat, electricity, are quite beyond the reach of anyone of the senses' (p. 4). We have therefore all this time apparently been under a misapprehension in thinking that we see the sun, feel the heat of a fire, or perceive a shock of electricity; and the old saying '*nihil est in intellectu*', etc., is evidently an antique error. Equally remarkable is the wrath of the author against hospitals and dispensaries, 'the result of this unscientific philanthropy being that the miseries of the poor have been increased in manifold ways, and the miseries of the rich, the comfortable, and intelligent, have been unstudied and unrelieved' (p. 8). Indeed, to the author there is but one disease worth studying, viz., neurasthenia, and one prophet, viz., himself. After such introductory remarks, the reader would naturally expect further evidences of monomania in the volume; yet, with all this nonsense, there is a good deal of clinical study of certain symptoms of lack of nerve-power, without structural disease, in the book, which will repay perusal.

We think Dr. Beard quite in error in imagining that these symptoms are new, or intimately connected with our present state of civilisation, or peculiar to the United States; for most, if not all, of them may be found described in the older treatises on hypochondria, hysteria, and the consequences of sexual excesses and irregularities. This will at once become evident on giving a list of the symptoms which characterise Dr. Beard's neurasthenia—tenderness of the scalp; dilated pupils; sick headache; changes in the expression of the eye; congestion of the conjunctiva; disturbances of the nerves of special sense; muscæ volitantes; noises in the ears; atonic voice; deficient mental control; mental irritability; hopelessness; morbid fear (this is further subdivided into fear of lightning, or astrophobia; fear of places or topophobia; the latter being either fear of open places or agoraphobia, or of narrow places, claustrophobia; fear of man, anthropophobia; fear of woman, gynephobia; fear of being alone, monophobia; fear of disease, pathophobia or hypochondriasis; fear of everything, pantaphobia; fear of contamination, mysophobia; flushing and fidgetiness; frequent blushing; insomnia; drowsiness; tenderness of the teeth and gums; nervous dyspepsia; deficient thirst and capacity for assimilating fluids (under this heading it is stated as a highly interesting fact that a patient rarely drank water either at meals 'or between meals'!); desire for stimulants and narcotics; abnormalities of the secretions; palmar hyperidrosis; salivation; general hyperæsthesia; heaviness of the loins and limbs; shooting pains simulating those of ataxy; podalgia; tremulous and variable pulse and palpitation of the heart; local tremors; dysphagia; convulsive movements on going to sleep; cramps; several idiosyncracies to food, medicine, and external irritants, and sensitiveness to changes in the weather; numbness; a feeling of exhaustion; ticklishness; general or local itching; general and local chills and flushes of heat; cold feet and hands; nervous chills; sudden giving way of general or special functions; temporary paralysis; 'diseases of men and women'; oxalates, urates, phosphates, and spermatozoa in the urine; excessive gaping and yawning; appearance of youth; rapid decay and irregularities of teeth.

With regard to the diagnosis of these symptoms from those connected with organic diseases, the author remarks that the latter are usually fixed and stable, while those of neurasthenia are fleeting and transient; that some symptoms of neurasthenia, such as itching, flushing, etc., do not appear in structural disorders; that in organic disease reflex activity is generally diminished, while in functional disease it is generally increased; that neurasthenia is most likely to occur in those in whom the nervous diathesis predominates. To all these statements exception may be taken. Thus, for instance, the pains of ataxy are most transient in their appearance; itching and flushing are common in cutaneous and gastric diseases; reflex activity is largely increased in many diseases of the brain and spinal cord, such as late rigidity after cerebral hæmorrhage, primary lateral sclerosis, etc.; and epilepsy, chorea, and insanity are more apt to occur in those in whom the nervous diathesis predominates. Nevertheless, we agree with the author in thinking that there is a chronic condition of the nervous system in which the force is impaired, the action unstable, and where there is an excess of local and general irritability without organic lesion.

In the chapter on treatment we find an enormous number of remedies mentioned, sometimes with shrewd remarks. Thus, he says of the bromides that they are often used too long; that the great question is to know when to stop using them; and that giving very large doses for a few days may be more advantageous, than to give smaller ones for a very long time. Of strychnia, on the other hand, he says that it is one of our older remedies, that it cannot be used in all cases, for sometimes it is depressing and sometimes too exciting! We fail to see the instructiveness of such remarks. The author gives, however, good directions about the use of blisters and the actual cautery. Altogether his book is a medley of good and bad; there is too much flashy sensational writing, which is intended for the public rather than for the profession, and would not be tolerated in this country; while the author's success in practice is paraded in a fashion which sails too close to advertising. Yet there is merit in directing professional attention to the circumstance that many apparently alarming symptoms do not have that fatal significance which is assigned to them by many practitioners, and that more attention should be given to the treatment of subjective signs than is often accorded to them. We have ourselves seen numerous patients who suffered quite as much from simple depression of nervous force as if they had had severe structural disease, and who were not improved by having been told that it was all imagination, and that they should forget all about it. It is just in such functional disturbances that the greatest therapeutic successes may be obtained, and where the patients are often driven to charlatans from being neglected by regular practitioners.

JULIUS ALTHAUS, M.D.

Diagnosis and Treatment of Ear-Diseases. By ALBERT H. BUCK, M.D. New York: W. Wood and Co. 1880.

THIS work differs from many text-books on the same subject, inasmuch as it consists almost entirely of the author's own experience in the department of otology. Whatever may be thought of the advisability of introducing records of cases into a text-book, there is no doubt that it greatly enhances the interest of the work to those already acquainted with the subject. It may be doubted, however, whether the very frequent introduction of cases does not detract from its value to the general practitioner; more especially when, as in this book, the cases are printed in similar type to the rest of the text, and are not usually distinctly headed; so that, unless one be reading continuously, it is not always easy to remark where a case begins or ends.

After a chapter on the physiology of the ear, in which, amongst other things, the author gives reasons for supposing that the function of the semicircular canals is to act as a safety-valve to the labyrinth, the examination of the patient is entered upon; and here the author's description of the instruments required strikes us as particularly good. In more than one place in the book, he inveighs strongly (too strongly as it appears to us) against the frequent use of the syringe for cleansing the ear. In skilled hands he greatly prefers, for this purpose, the aural curette, cotton-holder, probe, and forceps. He is confident (p. 62) that, if physicians would give the instrumental method of removing cerumen a fair trial, they would not be willing to submit themselves again to 'the sloppy thraldom of the syringe'.

He records three cases of syphilitic affections

of the external auditory canal; and, in opposition to Schwartze, arrives at the conclusion that well-defined lesions of constitutional syphilis may occur in the auditory canal as well as in other parts of the body. Under the head of purulent affections of the middle ear, the author also reports two cases in which, as he considers, characteristic symptoms of syphilis were found on the membrana tympani. They presented the peculiar feature of a melting away or death of portions of the membrane (without any evidence of the occurrence of pressure from within), giving rise to perforations of that structure.

To return to the external auditory canal, the author has never met with a case of exostosis in which operative interference appeared indicated. He considers, in fact, that there are only two conditions in which the operative removal of bony tumours from this situation should be recommended, viz. : 1. In a case in which, one ear being very deaf, an exostosis occludes the meatus of the other ear, depriving the patient of his hearing, it having been first, however, clearly established that an useful degree of hearing existed in the ear before it became entirely closed by the bony growth'; 2. In a case of chronic purulent inflammation of the middle ear, in which a bony growth prevents the escape with sufficient freedom of the purulent discharge from the middle ear.

Non-purulent affections of the tympanum are described by the author under the heads of acute and subacute catarrhal inflammation, and exudation (mucous, serous, and hæmorrhagic) into the tympanum. In the treatment of this class of cases, the author has no faith in intratympanic injections through the Eustachian tube, nor in the use of vapours. The remaining cases of non-purulent inflammation of the tympanum, he classes under the head of 'chronic subacute catarrh' (*sic*), of which affection he recognises three groups. As a class, he considers, these are practically incurable, and less than three pages are devoted to their consideration.

In discussing acute purulent inflammation of the middle ear, and its association with intracranial mischief, the author remarks that, owing to the close relation of the dura mater to the tympanic cavity by means of the blood-vessels piercing the roof of the tympanum, a localised meningitis may be assumed to exist in every severe case of acute purulent inflammation of the middle ear. Chronic purulent inflammation of the middle ear is, in ninety-nine cases out of a hundred, the author considers, caused by lack of proper treatment during the acute stage of the inflammation. This statement, coming from an observer, the candour of whose remarks is evident throughout the work, is extremely important, and deserves attention. Of chronic purulent inflammation of the middle ear, the author recognises three types; 1, simple, uncomplicated cases; 2, proliferative cases (those in which granulation-tissue or polypi are present); and 3, cases in which the bone is involved; the latter being again subdivided into several varieties.

In an interesting chapter on fracture of the temporal bone, which the author regards from an aural point of view, he justly remarks on the importance of an aural examination in all cases of suspected fracture of the temporal bone. The author's own experience, as far as it goes, would lead him to modify the statements of previous observers (*e.g.*, Prescott Hewett) on the diagnostic value of hæmorrhage from the ear, to the effect that 'when a fall or blow upon the head is followed by bleeding from the ear, no matter how trivial, we may diagnose a fracture of the temporal bone in the neighbourhood of Shrapnell's membrane, and probably in the line of the Glaserian fissure.' The author considers that, as far as the mere symptom of bleeding from the ears is concerned, we are scarcely justified in assuming that the line of fracture extends beyond the region of the tympanum

As the result of his own experience, combined with a careful analysis of Schwartze's fifty cases of perforation of the mastoid bone, the author comes to the conclusion that the existence of a sclerosed condition of the mastoid process may be assumed in the great majority of cases of chronic purulent inflammation of the middle ear.

In the chapter on mastoid disease, the author cautions against making Wilde's incision too far forward, and cites a case in which he purposely made it further forward than usual, the result being the formation of a false aneurism on the posterior auricular artery. A chapter on the 'different forms of aural disease in which the labyrinth is believed to be involved' concludes the volume.

The work, on the whole, is a very able and practical one, and is of considerable interest, if only for the careful record of cases which it contains.

E. Cresswell Baber, M.B.

Lectures on Diseases of Bones and Joints. By C. Macnamara, F.R.C.S., Surgeon and Lecturer on Surgery at the Westminster Hospital, etc. Second edition, pp. 550. London: J. and A. Churchill. 1881.

Without unduly depreciating the distinguished author's first edition of '*Clinical Lectures on Diseases of Bone*', we may say that the present volume is a very great improvement upon it. Larger and more complete, yet better arranged and more condensed, it retains the clinical form, and, without precise didactic method, introduces pathology to explain recorded cases, and cases to illustrate pathology, in the practical interesting manner that clinical lectures best permit. It is still of handy size and excellent typography.

Mr. Macnamara's well known interest in education leads him to dedicate the work to Professor Humphry, 'in admiration of his persevering energy in the cause'.

The first chapter, treating of development and growth of bone, is largely based on microscopic observation, 'which shows' that until vessels have permeated cartilage, the nuclei of 'cartilage-cells are small and uniformly scattered throughout the hyaline matrix': at a certain period of embryonic life, vessels grow into the temporary cartilage at definite points, and terminate in a plexus; the nuclei proliferate in rows—and inorganic matter is deposited between. 'Along the course of the blood-channels, but especially at their termination, the cartilage-cells are converted into *medulla*, which in its turn is transformed into osseous tissue'.

Mr. Macnamara quotes the experiments of Syme and MM. Rigal and Vignal to show that *new* bone after injury, etc., is developed from periosteum, rather than from medulla. The same experiments throw light on the fact of bone forming soonest at points of callus farthest from fracture, because irritation there is less intense. The following is a good illustration of basing practice upon pathology. The greater number of vessels passing into the extremities

of long bones come from neighbouring tissues (perforating the periosteum), not from the nutrient artery; *e.g.*, the vessels in the lower end of the femur have been injected from the popliteal; hence, well-applied pressure round this part may influence inflammatory changes in the bone controlling the blood-supply to its spongy tissue; and if we smear a thick layer of belladonna and mercurial ointment over the skin covering the condyles and joint, and encase the whole in strapping or rubber bandage, we place the inflamed intra-osseous structures in much the same condition, as to blood-supply, as the iris after dilatation by atropine for iritis. Again, after describing a subcartilaginous extra dense layer of bone (as to which he agrees with Dr. Ogston), he remarks that, behind and besides this in chronic inflammation, and some ununited fractures, sclerosis occurs 'from hyperaction of the medulla', and before union can take place the whole of the sclerosed ends must be removed, and the healthy medulla of the fragments must be brought together; without such removal, pegs, etc., are of no use.

The second lecture is also greatly improved, and the theory of oxygen-contact leading to greater frequency of pyæmic emboli in the lungs is omitted. Septicæmia is well contrasted with pyæmia, osteomyelitis with suppurative periostitis, and many interesting cases are related. Mr. Macnamara saw much of these conditions in Calcutta, and adds his testimony to the value of antiseptic dressings; he notes, what every surgeon must have noted and learnt, sometimes only by painful experience, the frequency with which commencing bone-disease, and even pyæmic conditions, are mistaken for rheumatism.

The intestinal catarrh of pyæmia may be well controlled by Dover's powder, and full doses of quinine (six grains thrice daily for a boy).

Very noteworthy is the action of pilocarpine in some cases; *e.g.*, a man, aged 46, after fracture of a leg, got 'septo-pyæmia'; 'temperature varied from 104 deg. to 107 deg.; he had low muttering delirium and extremely feeble heart action—was evidently dying'. By the advice of Dr. Murrell, half a grain of pilocarpine was injected beneath the skin of the arm with truly surprising effect; in ten minutes profuse perspiration broke out, the tongue became moist, he asked for food, and began to talk—temperature fell to 103 deg.; however, he relapsed next day, improved again with the same remedy, but ultimately died. The value of aconite is not referred to, but deserves reference.

Acute epiphysitis is well described, one case, aged three weeks, being very instructive; the swelling of the femur had been attributed to *acute arthritis;* death followed from pyæmia, but an early free opening might have saved life. Though most frequently met with under two years of age, this malady is not confined to infant life. Effectual drainage of the part is the important early treatment—when separation of the diaphysis has taken place.

The symptoms and pathology of tuberculous bone disease are next described; and the author agrees with Gross and Gibney that no injury can induce it, independently of tuberculous diathesis, and, if its onset be not traumatic, the old canon of *rest* is less important than securing free air and light. The tubercle so far destroys medulla, that new hard bone is not formed at the seat of injury as in ordinary inflammation. The thermometric contrast between this and syphilitic bone-disease is well marked, there being a constant evening rise during the acute stage of the latter, but no constant temperature-scale in tuberculous cases.

A full account is given of M. Parrot's views as to syphilitic changes, especially in the calvarium (changes, by tracing which, we have heard him convict of syphilis Indians and Mexicans of almost prehistoric times), and we note that Mr. Macnamara, with the majority of English observers, traces many similar changes to malnutrition in non-syphilitic infants.

The cranio-tabes spots in rickets he describes as 'small fontanelles' closing as such; he has never known softening of a part once hardened.

A propos of mollities ossium and brittle bones, his observations on the bones of insane patients give no ground for the supposition that they are unusually brittle. (In this chapter occurs one of the few instances of insufficient correction, thus—'Jones records a case of a mulatto who had fifty fractures, with a cousin affected in the same way.')

Under *repair of fractures*, some good cases of united patellæ are given, the good result being traceable to free division of the quadriceps tendon, and in one case, of the ligamentum patellæ also; serous fluid was drawn off by aspiration, and the fragments fixed by ordinary means.

Under exostosis, Mr. Macnamara describes one on the inner side of the right thigh, four inches long, in the line of the femoral artery; and it would be worth while to contrast this with the curious ossification of the adductor tendon, said to occur most often in great riders, and of which a marked example has just come before us. Mr. Bryant describes it.

Synovitis is well treated by Martin's bandages applied over belladonna dressing and cotton-wool. Some pain may be caused at first. The limb must be bandaged well from the foot upwards (with linen roller). A chronic case of 'hydrops articuli' recovered well and without much irritation, after the injection of an ounce of pure tincture of iodine.

Hip-joint disease is carefully treated of. An interesting case of abscess under the tensor vaginæ femoris is contrasted with it. Ample justice is done to Sayre's method in spinal curvature, and calisthenics are prescribed for early stages of the lateral form; no special form of these is suggested, and certainly riding is not always advisable for girls. The systems of Ling, Roth, and others, founded on direction of the patient's will to exercising special groups of muscles, well deserve mention.

But enough of detail and illustration has been given to show the practical character of the book, which may be said, in brief, to be the best monograph we know on its own subject. It leaves the impression of high-class modern scientific teaching, contains much original work, utilises largely hospital experience, and is well calculated to enhance the author's own reputation and that of the medical school of which he is a distinguished member.

C. D. F. PHILLIPS, M.D.

A Text-Book of Practical Histology. By WILLIAM STIRLING, M.D., F.R.S.E. London: Smith, Elder, and Co. 1881.

DR. STIRLING has succeeded in producing a very excellent work upon the subject of practical histology. He has long been known as one of the most successful teachers of the sciences which are strictly preliminary to the medical education, in that part of the United Kingdom in which successful teachers in the same subjects are by no means rare. From long experience, Dr. Stirling has been enabled to

discover what help is required by medical students in a course of practical work such as the present volume embraces ; and we are glad to observe that he has throughout made his work thoroughly practical, and has in almost every case avoided, as far as is possible, reference to theories or doubtful observations.

The object of a medical student in attending a course of practical histology is, we apprehend, in the first place, to gain an accurate knowledge of the appearances presented by the various tissues in their normal condition ; for without such knowledge he will assuredly be as much at sea when he comes to deal with the morbid tissues, as is he who endeavours to distinguish the gross morbid change in a granular kidney before he has mastered the appearance of a healthy one. In the second place, the student learns in a course of practical work the art of manipulation ; and in practical histology more particularly, he acquires a habit of making delicate muscular movements, which will stand him in good stead in his subsequent career. Lastly, he learns the elements of scientific precision ; and this will be especially the case if the necessity of drawing be impressed upon him from the beginning of his work with the microscope.

Dr. Stirling very properly lays great stress upon the value of careful drawings, because he finds that the majority of students prefer to shirk this portion of their task, as it seems to them a work of supererogation when they have the specimen itself to refer to, though they forget that each sketch of the object serves very materially to impress its details upon their mind, whilst it renders apparent many points which are liable to be overlooked upon a hasty examination. A series of outline plates is, therefore, bound up with the letterpress in the present volume; and it is intended that each student should fill them in from preparations which he has himself made in the class. If this scheme be fully carried out, each student will, at the end of the session, be in possession of an atlas representing the details of the more important preparations. The idea is an excellent one, and the author tells us that it works well in practice, since skill in filling in the necessary details is rapidly acquired.

Dr. Stirling dedicates his work to Professors Ludwig and Ranvier, the great foreign authorities upon physiology and histology, and his masters in the craft; whilst in the preface he offers thanks to Drs. Lawson and Birch for assistance in revising the proof-sheets, though we think he would more fittingly have acknowledged the aid which he has derived from Dr. Klein, to whose recently published Atlas of Histology continual reference has evidently been made.

The introduction to the volume occupies the first fifty-five pages, and comprises a very excellent and complete, although necessarily brief, account of the various details with which a student should be familiar who is commencing the subject of practical histology. The method of using the microscope, of cleaning lenses and cover-glasses, of employing dry and immersion objectives, and of the employment of the camera lucida, may be selected as specially noteworthy from the clearness with which they are explained. The moist chamber for the study of the properties of living protoplasm, and the mode of applying vapours and gases, are also described. A special section is devoted to the preparation of tissues for microscopic examination, which is all the more satisfactory, from the assurance given by the author in the preface that he has introduced no method which he has not found from repeated trials to be successful, and that the methods described are those which, after nine years' experience in the teaching of practical histology, he has found to be really reliable. A work of this kind is, indeed, valuable only in so far as it actually gives the experience of the author ; and in the present instance our own experience fully bears out that of Dr. Stirling. The method of cutting sections is then explained, and the various kinds of microtomes are described, illustrations being attached to enable the student to recognise them. Amongst the staining fluids the author has devoted special attention to the gold and silver method, whilst he briefly alludes to the results obtainable from double and treble staining. The account of the method of mounting tissues is not so satisfactory as the preceding, since we cannot agree with the author's preference for objects mounted in glycerin, whilst we are quite certain that dammar is not nearly so serviceable as a preservative agent as is Canada balsam. Lastly, the fluids for injection are mentioned ; and directions are given for injecting the blood-vessels by means of mercury and water apparatus, and of the lymphatics by the 'einstich' process.

The second portion of the book consists of the practical work ; it embraces a short account of each of the chief organs and tissues, to which is prefixed a description of the method to be followed in each case in order to prepare the necessary specimens. The examination of the tissues appears to be conducted with great regularity, and the directions laid down are so clear and concise that the student should have little or no difficulty in following them out. References are made to the outline plates which may thus be readily filled in. To this part of the work little can be added, and it is the more trustworthy, inasmuch as constant reference has been made to the latest work upon the subject, whilst the most recent nomenclature has throughout been adopted. We can only hope, therefore, that the student who has conscientiously and thoroughly worked through this atlas, and who has thereby obtained a grasp of the fundamental facts in the science of histology, will also have acquired so great an interest in the subject as shall enable him in future years to follow up what he has now learnt, and to enlarge our present field of knowledge by independent research.

As regards the publishers' part of the work, the atlas of histology does them credit ; it is well printed upon good paper. We could have wished, however, that the oblong form had been preferred to the square quarto which has been adopted, since we find that it is very difficult to reach some of the upper figures, especially if the lower ones have been previously filled in.

D'Arcy Power, M.A.

The Transactions of the Edinburgh Obstetrical Society. Vol. v. Edinburgh: Oliver and Boyd. 1880.

This volume contains an account of the proceedings of the Society during the years 1877 to 1880. The chief interest of the present volume depends on the number of interesting and original communications by Prof. A. R. Simpson. Dr. Underhill contributes three cases of accidental hæmorrhage. In discussing the treatment, we are glad to see that Dr. Underhill thinks that the use of the plug is not without danger, particularly in the hands of the inexperienced, who might easily be led into a false feeling of security, and neglect to watch

over the uterus. He relies on—first, rupture of the membranes, with administration of ergot or ergotin, provided there be no condition present, such as contracted pelvis, to contraindicate its use; secondly, should the hæmorrhage continue, turning, if it were still available, or, better still, rapid dilatation of the os with Barnes' bags, and subsequent speedy delivery, if necessary, with the forceps. The book is well got up, and carefully edited; we would, however, remind the editors that pubis is the genitive case of pubes, and that forceps is a singular noun.

FANCOURT BARNES, M.D.

Bovine Tuberculosis in Man: an Account of the Pathology of Suspected Cases. By CHARLES CREIGHTON, M.D.Cantab. [pp. 119. London: Macmillan and Co. 1881.

THE author first succinctly describes the most striking peculiarities of bovine tuberculosis on the authority of Walley, Trasbot, Fleming, and other veterinary writers. Of these, the fact that the disease has its most characteristic manifestations in the serous membranes, is the most important. Growths occur in this situation, which rapidly caseate and assume various forms, recalling, sometimes, the 'duckweed' seen on a stagnant pond, whence the German name 'Meerlinsigkeit'; sometimes the growths have a fancied resemblance to pearls, whence the name 'Perlsucht', by which the disease is most generally known in Germany; in England the same growths have suggested the vulgar name 'The Grapes'. Nodules, sometimes resembling infarcts in form, are found in the lungs; by a subsequent necrotic process these nodules may be replaced by closed smooth-walled cavities, which, according to Dr. Creighton, Virchow has mistaken for bronchiectasis, whence his statement that that condition frequently occurs in the cow. The lymphatic glands are generally affected; the intestines, bones, and mammæ in many cases. Gerlach and Orth have demonstrated that, by mixing tubercular matter from the cow with their food, a disease can be communicated to the calf, goat, and rabbit, which closely resembles in its pathological products bovine tuberculosis. Dr. Creighton believes that the resemblance between the *post mortem* appearances found in the twelve cases he reports in this work, and those of bovine tuberculosis, are sufficient to establish the identity of the diseases. The chief peculiarities of bovine tubercle in its intimate structure are the unusual vascularity of its periphery, and the number of giant-cells found in the area just within the zone of vascularity, and lying between it and the central area of early necrosis. These peculiarities he finds reproduced in the structure of the tubercle in the cases here reported. He describes and figures the pleural growths in several cases, and points out that they tally on naked-eye as well as on microscopical examination with the pleural growths of 'perlsucht'. One of the cases reported had been treated, eight months before death, for a febrile attack which had been diagnosed as typhoid fever. It is also pointed out that in an epidemic, considered to be of typhoid fever, reported by Dr. W. H. Spencer, which occurred in an industrial school at Bristol, all the cases which died revealed on *post mortem* examination extensive tuberculosis of the serous membrance. Dr. Creighton, therefore, asks whether some epidemics, which have been set down to typhoid, may not really have been instances of an infective tuberculosis. The mammary gland in the cow may be affected, and in that case the quantity of milk yielded is at first increased, though the quality soon deteriorates; it is suggested that the disease is transmitted to man through the milk. A case, reported by Walley, is related, in which two young pigs were affected with tuberculosis after being fed on the milk of a tuberculous cow. [Albert, in an article translated for the *Veterinary Journal*, relates a case which came under his observation; two litters of pigs, of different ages, were fed on the milk of a tuberculous cow; the younger litter died in about three months, and showed evidence of tuberculosis *post mortem*; the older litter survived, but when killed in the following winter there was found, in the only animal examined, a caseous mass in the spleen, and grey tubercle in the mesenteric glands. —*Rep.*] Dr. Creighton does not look upon the lymphatic gland as the centre of infection, as has been generally taught; these so-called caseous glands are really tubercular, the caseous appearance being due to the agglomeration of a vast number of separate tubercles, each having the peculiar structure above referred to. The lesions in glands, serous membranes, lungs, and other organs, are co-ordinate products of the tubercular virus. This virus enters the economy by the digestive tract, though not necessarily, perhaps, through an ulcerated surface. From some of Orth's experiments, it appears that the activity of the virus is not destroyed by boiling. DAWSON WILLIAMS, M.B.

Rainfall and Climate in India. By SIR JOSEPH FAYRER, K.C.S.I., M.D., etc.

THIS paper was read at a meeting of the Victoria Institute, and is published in their transactions. It is of some importance as giving, in a brief compass, a report of the rainfall of numerous places in India. As, in point of time, India is sufficiently near to this country for a tourist to select it as an unrivalled place for sporting, the excerpts from Mr. Blandford's accurate and extensive records of Indian climate are likely to be useful. Sir J. Fayrer points out that the climate and varying seasons of India owe much of their peculiar character to the monsoons, which are the great producers and distributors of rain in India. This term is applied to the great air-current that blows one half of the year northwards, and the other half southwards. The south-west monsoons commence in April, and terminate in October, and cause a very heavy rainfall on the southern and western coasts. In 1878 and '79, the years for which tables are given, the rainfall varied enormously in different localities, having been, in 1878, as little as 9.24 inches in Sind and Cutch, and 24.36 in Rajputana, whilst it was as much as 118.77 inches in the Ghauts, 170 inches in Tenasserim, and 171 inches in Arakan. In the table for 1879, the rainfall is given for each month of the year for thirty-four places. Generally speaking, 1879 was a dry year, but at several places the rainfall was enormous, viz., 160 inches in Darjeeling, most of which fell in June, July, August, and September; 113 inches in Silchar and Rangoon; and 227 in Akyab. At Cherra Poonjee, 600 inches of rain fell in half the year; and Sir J. Fayrer says that he registered 610 inches in one year. At Mahableshwar, the fall amounts to about 300 inches. The average at Calcutta is about 63 inches, at Allahabad 39 inches, and a little more at Lucknow; at Bombay 74, Madras 49, Patna 40, whilst at Chittagong it is 103, and Rangoon 101 inches. Sir J. Fayrer quotes an ac-

count by Mr. Robinson, of the beginning of rain after a long continued drought, which is highly picturesque.

There is very little said about temperature, but the means are given for a few well known places. At Calcutta, the mean in May, the hottest month, is 89 deg., in January 70, but it ordinarily ranges between 45 deg. and 92 deg., occasionally rising to 104 deg.; Madras 88 in June, varying between 72 deg. and 92 deg.; Bombay 86 deg. in May, range small; Peshawur 91 deg. in June and July, January 52 deg., range great; Punjaub, June 89, range from 32 deg. to 110 deg.; Bangalore, May 81 deg., January 69 deg., range small. The coldest months are December and January. As regards the effects of heat, Sir J. Fayrer says they are very different, according to the dryness or dampness of the air; as dry air, in motion, with a temperature of 100 deg., is more tolerable than stagnant air loaded with moisture is at 80 deg., so that the climate of Northern India is more pleasant than that of Lower Bengal, and parts of Southern India.

RECENT GERMAN BOOKS.

Bernhardt, Dr. M.—Beiträge zur Symptomatologie und Diagnostik der Hirngeschwülste. gr. 8. 1881. 8 Mark.

Binz, Prof. Dr. C.—Grundzüge der Arzneimittellehre. Ein klinisches Lehrbuch. Siebente Auflage. gr. 8. 1881. 6 Mark.

Casper, Johann Ludwig.—Handbuch der gerichtlichen Medicin. Neu bearbeitet und vermehrt von Dr. Carl Liman, Geh. Medicinal-Rath, Prof. der gerichtl. Med. und Stadtphysicus zu Berlin. Siebente Auflage, In zwei Bänden. gr. 8. I. Bd. (Biologischer Theil.) 818 S. 1881. 18 Mark. II. Band. (Thanatologischer Theil.) Im Druck.

Eulenberg, Dr. Herm.—Geh. Ober-Medicinal-und vortragendem Rathe im Ministerium, Handbuch des öffentlichen Gesundheitswesens. Im Verein mit Fachmännern bearbeitet und herausgegeben. Erster Band. gr. 8. 1881.

Fournier, Prof. Dr. A.—Syphilis und Ehe. Vorlesungen, gehalten im Hospital Saint-Louis in Paris. Ins Deutche übertragen von Dr. P. Michelson. Autorisirte Ausgabe. 8. 1881. 5 Mark.

Fuhrmann, Dr. F.—Kreisphysicus, Stersblichkeits-und Krankheits-Statistik im Kreise Niederbarnim, sowie Organisation zur Bekämpfung epidemischer Krankheiten. Mit Tabellen und lithogr. Tafeln. 1881. 5 Mark.

Gurlt, Prof. Dr. E.—Leitfaden für Operationsübungen am Cadaver und deren Verwerthung beim lebenden Menschen. Fünfte Auflage. gr. 8. 1881. 4 Mark.

Guttmann, Dr. Paul, dirig. Arzt des städt. Barackenlazareths und Privatdocent, Lehrbuch der klinischen Untersuchungsmethoden für die Brust- und Unterleibsorgane, mit Einschluss der Laryngoscopie. Vierte vielfach verbesserte und vermehrte Auflage. gr. 8. 1881. 10 Mark.

Helfft, Dr. H.—Handbuch der Balneotherapie. Leitfaden für practische Aerzte bei Verordnung der Mineral-Quellen, Molken, Seebäder, klimatischen Kurorte, etc. Herausgegeben vom San.-Rath Dr. Georg Thilenius. Neunte Auflage. gr. 8. 1881.

Henoch, Prof. Dr. Ed.—Vorlesungen über Kinderkrankheiten. Ein Handbuch für Aerzte und Studirende. gr. 8. 1881. 16 Mark.

Herzenstein, Dr. U.—Beitrag zur Lehre der Augenmuskellähmungen. (Berechnung aller möglichen Combinationen der ein- und doppelseitigen Augenmuskel-paralysen.) Mit zwei semiotischen Tafeln der Combinationen 1. Klasse. Lex.-8. 21 S. M. 2 lithogr. Tafeln. 1881. 1 Mark 60 Pfennings.

Koenig, Prof. Dr. Fr.—Lehrbuch der speciellen Chirurgie. Für Aerzte und Studirende. Dritte Auflage. In drei Bänden. gr. 8.

Koeppe, Dr. C.—Die Homöopathie Hahnemann's und die der Neuzeit. Eine vergleichende Studie. 8. 100 S. 1881. 2 Mark.

Lewin, Dr. L.—Die Nebenwirkungen der Arzneimittel. Pharmacologisch-klinisches Handbuch. 1881. 6 Marks.

Munk, Prof. Dr. H.—Ueber die Functionen der Grosshirnrinde. Gesammelte Mittheilungen aus den Jahren 1877—1880. Mit Einleitung und Anmerkungen. gr. 8. Mit Holzschnitten und einer lithogr. Tafel. 1881. 3 Mark.

Munk, Dr. J.—Physiologie des Menschen und der Säugethiere. Ein Lehrbuch für Studirende. gr. 8. Mit 68 Holzschnitten. 1881. 15 Mark.

Orth, Prof. Dr. Joh.—Cursus der normalen Histologie. Zur Einführung in den Gebrauch des Mikroskopes, sowie in das practische Studium der Gewebelehre. Zweite verbesserte und vermehrte Auflage. gr. 8. Mit 107 Holzschn. 1881. 8 Mark.

Rossbach, Prof. J. M.—Lehrbuch der physikalischen Heilmethoden für Aerzte und Studirende. Erste Hälfte. gr. 8. Mit Holzschnitten. 1881. 4 Mark.

Schweigger, Dr. C.—Klinische Untersuchungen über das Schielen. Eine Monographie. gr. 8. 1881. 4 Mark.

Sommerbrodt, Prof. Dr. J.—Die reflectorischen Beziehungen zwischen Lunge, Herz, und Gefässen. gr. 8. Mit Holzchnitten. (Separatabdruck aus der Zeitschrift für klin. Medicin.) 1881. 3 Mark.

Sonnenschein, F. L.—Handbuch der gerichtlichen Chemie. Neu bearbeitet von Prof. Dr. Alex. Classen. gr. 8. Zweite gänzlich umgearb. Auflage. Mit 58 Holzschn. und 1 Tafel. 1881. 14 Mark.

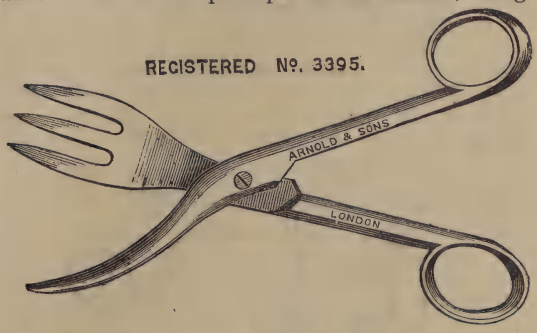
Tauber, Dr. Ed.—Die Anaesthetica. Eine Monographie mit besonderer Berücksichtigung von zwei neuen anaesthetischen Mitteln, kritisch und experimentell bearbeitet. gr. 8. 1881. 2 Mark 80 Pfennings.

Verhandlungen der deutschen Gesellschaft für Chirurgie. Neunter Congress. gr. 8. Mit 9 Tafeln und Holzschnitten. 1881. 12 Mark.

NEW INVENTIONS.

THE DESIDERATUM.

The Combined Knife and Fork has its origin in a suggestion made by Dr. John C. Hogan, and intelligently reduced to practice by the sole manufacturers, Messrs. Arnold and Sons, of West Smithfield, London, to whom the gratitude of the one-handed will no doubt be freely paid. It was invented by Dr. Hogan to obviate, as far as possible, the awkwardness and inconvenience attendant on the eating of their meals, by persons deprived of the use of either arm. It is on the principle of the shears; being

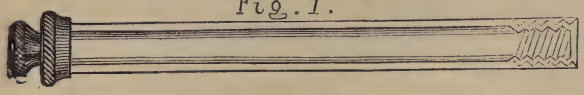


formed of a fork and cutting blade, which enables the person using it to divide at will, and raise his or her food. It can be had to suit either the right or the left hand, and with or without an indentation (which acts as a tooth) on the fork edge.

DISARTICULATING STETHOSCOPE.

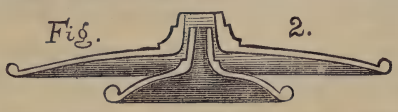
This instrument, designed by Dr. Whittaker, is contrived chiefly for convenience in carrying. One half the stem is contained within the other half, the screw-thread keeping it fixed. For use, the smaller

Fig. 1.



tube is unscrewed and applied the reverse way to the larger, and fixed by the screw, forming a stem similar to the ordinary stem of a stethoscope. Fig. 2 represents the ear- and chest-pieces as arranged

Fig. 2.



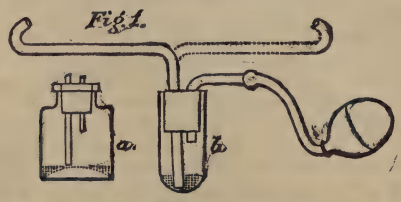
for carrying; one fits within the other. When required for use, they are separated, and the 'fitting' joints enable them to be fixed firmly and instantaneously to their respective ends of the stem, ground accurately to receive them. The chest- and ear-pieces, when arranged for carrying, take up no more room than a medal or a couple of coins, while the stem takes up the same room as an ordinary pencil; both may be carried in the waistcoat-pocket, and never noticed. The advantages will at once be obvious, since it is difficult to conceive a more awkward instrument than the stethoscope for carrying; and if the instrument can be made to equal the ordinary stethoscope in its acoustic properties, this ingenious device is sure to meet with approval. A comparative trial with this invention shows that (possibly owing to the necessarily flat surface of the chest-piece) in the latter respect it hardly comes up to the awkward but reliable wooden stethoscope. It is made by Hilliard of Glasgow.

DR. FORSTER'S NEW POWDER-INSUFFLATORS.

To those who have given any attention to diseases of the nasal passages, the powder-blower of Dr. A. H. Smith of New York is well known. Its principle is that of the common wash-bottle of the chemical laboratory, the medicated powder being substituted for water, and the force applied by an air-bulb. Dr. Forster says:—

'By practical experience in its use, I soon learned that, on account of the convexity of the bottom of the bottle, the powder was blown away from the tube, falling about the sides of the bottle and much of the force of the air was wasted. Fig. 1, *a*, is drawn to show this defect. To ob-

Fig. 1.



viate it, I had made some stout bottles in shape like a short test-tube, the omission of any shoulder permitting them to be easily cleaned if it be desired to change the powder. This, with their size, makes them more convenient to hold in the hand, the concave bottom rendering it unnecessary to keep the bottle on a horizontal plane. The tubes are made of either hard rubber or glass, the latter being preferable; besides being less expensive, they can be more easily cleaned, powders containing tannin readily blocking the rubber ones. With some glass tubing, a spirit-lamp, and a slight amount of manual dexterity, the tubes can be easily made of any desired length and curve to suit any special case. To save trouble, it is advisable to have a different bottle for each powder in general use. A stand can easily be made by boring the requisite number of holes in a piece of plank. The long curved tube originally intended for the posterior nares can be readily turned about, as shown by the dotted lines in fig. 1, *b*, and thus used anteriorly. In the cut, the air-bulb is not drawn proportionately large, nor is its valve shown. By substituting a straight tube for the curved one, the patient can easily be taught to use the blower for the anterior nares; the expense can be lessened by replacing the air-bulb with a glass mouth-piece and using the force of the expired breath. To treat post-nasal catarrh by applying powders to the vault of the pharynx, the posterior tube should be bent at a right angle, and not curved as for insufflating the nares from behind. The patient can easily be taught to make the application.

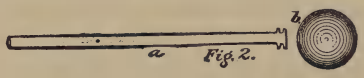


Fig. 2.

'Fig. 2 represents a modification of the Rauchfuss powder-blower, with the bulb detached. The glass tube has two shoulders or rims at one end, the first of which is inserted into the rubber air-bulb; the second prevents the tube from entering, and the thickness of the bulb lying between the two, it is firmly held in place. By crowding the distal end of the tube into the powder a sufficient quantity is taken up. By this instrument the powder is not well distributed, but deposited in bulk, as it were; and the principal use of this blower is to deposit a powder in one locality, as is the case when sulphur is applied topically to the throat, as many practitioners do about here when treating diphtheria. Since the cut was made, and the above was written, I have found that if the distal end is drawn out, leaving an opening one half the diameter of the rest of the tube, this insufflator answers fairly well, and has the advantage of being much less expensive than the one made of hard rubber. For some time I have used such a blower for applying boracic acid to the ear, the tube in this case being only six centimètres in length.

Fig. 3.

'Fig. 3 represents a bent glass tube, with an opening in the upper surface of the shorter arm. This I have designated a "spoon" insufflator; for when charging it for use, the opening permits the powder to be easily "spooned" up. This is closed by the tip of a finger, the powder being blown by the breath. This instrument is inexpensive, and answers admirably for the insufflation of sugar, camphor, etc., for the treatment of "snuffles" in infants, as recommended so warmly by Dr. Robinson in his

recent work on nasal catarrh. These can be made with shoulders, like the tube in fig. 2, a bulb added, and thus made available for self-use.'

Manufactured by Messrs. Leach and Greene, 1, Hamilton Place, Boston, U.S.

ROUSSEL'S APPARATUS FOR TRANSFUSION OF BLOOD.

This apparatus consists of a receiver intended to be applied to the arm of the person furnishing the blood; for instance, it may be applied on the anterior surface of the forearm at the level of the median vein.

This receiver is to be fixed by means of an opening which communicates by a tube with the receiver; two tubes set out from this receiver, one going to a vessel containing warm water, the other bearing a small aspirating- and force-pump, terminating in two small tubes, which may be opened or closed at will, and of which one is intended to penetrate into the vein of the patient. On the top of the bell is placed a spring lancet, which is regulated by means of a screw, and which opens the vein. When the

1. The vein of the person furnishing the blood, rendered turgid by a bandage. 2. Annular scarificator placed over the vein. 3. Lancet holder. 4. Aspirating tube of hot water to exhaust the air. 5. Pump receiver to contain ten grammes of blood. 6. Bifurcated tube for the exit of the water. 7. Cannula introduced into the prepared vein of the person who is to receive the blood.

apparatus is in place it is filled with water; the column of blood drives out this water; and when once the blood is thoroughly pure, the small sound is inserted into the vein. The transfusion of 250 grammes of blood can be effected in four or five minutes. This apparatus is manufactured by Messrs. Maw, Son, and Thompson.

THE LONDON MEDICAL RECORD
ILLUSTRATED GUIDE
TO SELECT EXHIBITS
AT THE
MEDICAL AND SANITARY EXHIBITION
AT SOUTH KENSINGTON.

DR. T. ANDERSON, 17, Stonegate, York, shows an Ophthalmometer.

THE ST. JOHN'S AMBULANCE ASSOCIATION exhibits a variety of appliances adapted for ambulance work, consisting of an Ambulance Hamper, Ambulance Knapsack, Ambulance Litters, and a Stretcher.

MR. C. HEATHER BIGG, C.E., of Wimpole Street, sends some interesting Orthopædic Appliances.

MESSRS. F. CALVERT AND CO., Bradford, near Manchester, send a collection of Pharmaceutical Preparations.

YOUNG'S PARAFFIN LIGHT AND MINERAL OIL COMPANY, LIMITED, West George Street, Glasgow, show sample of refined Paraffin and Splints.

THE NEWRY MINERAL WATERS COMPANY, Newry, Ireland, send a quantity of their well-known Aërated and Mineral Waters.

Mr. A. B. CORTIS, F.C.S., Worthing, has a collection of Disinfectants on show.

MR. WILLIAM COWAN, Avenue Street, Springburn, Glasgow, exhibits a Vaccination Shield.

MESSRS. SAMUEL GULLIVER AND CO., Aylesbury, send a collection of the celebrated Aylesbury Aërated and Mineral Waters.

MR. J. H. HAYWOOD, Castle Gate, Nottingham, has a good collection of Surgical Appliances.

MESSRS. W. B. HILLIARD AND SONS, Renfield Street, Glasgow, exhibit a collection of Surgical Instruments and a Surgical Operating Table.

MESSRS. HORN AND SON, Elgin Road, Croydon, exhibit a Regulating Digitorium.

MR. W. H. LLOYD, Heath Road, Harborne, near Birmingham, sends several Bronchitis Kettles of his invention, also Vapour Baths.

DR. RICHARD NEALE, Boundary Road, N.W., sends a Punkah or Chemical Lung.

MR. SAMUEL NEWMAN, Railway Approach, London Bridge, exhibits a good assortment of Medical Dietetic Articles.

MR. N. H. NIXON, of University College Hospital, introduces several Appliances for the Ward and Sick Room.

MR. JAMES PACKHAM, Katherine Street, Croydon, shows Mineral and Aërated Waters.

DR. G. H. PHILIPSON, Eldon Square, Newcastle-on-Tyne, sends the original McIntyre Splint.

MESSRS. J. POORE AND SON, Andover, Hants, exhibit their Aërated and Mineral Waters.

MR. HY. J. PRATT, Blossom Street, York, shows samples of his Cod-liver Oil Jelly.

MESSRS. JOHN RICHARDSON AND CO., Friar Lane, Leicester, make a good display of their specialities, consisting of Chemicals, Drugs, Medicine Chests, Pharmaceutical Preparations, and Thymol Soap.

MR. T. P. TEALE, Cookridge Street, Leeds, contributes an interesting collection of Surgical Instrumen s.

Aërated and Mineral Waters are sent by MR. JOHN WALSH, of Brackley.

A Model of a Bed-Lift is shown by MR. THOMAS WILMHURST, Grosvenor Road, Milltank, S.W.

MR. M. PILLISCHER, New Bond Street, exhibits Apparatus used in the investigation of disease, a choice collection of Electrical and Optical Instruments, and some fine Microscopes.

THE PATENT ELASTIC COTTON COMPANY, LIMITED, Rye Hill Park, Peckham Rye, have a variety of samples of their Elastic Cottons and specimens of their Hospital Furniture.

MR. WM. HAMILTON, Ship Street, Brighton, shows an

Invalid Couch; and Mr. I. N. JAKINS, of Osnaburgh Street, a Bed-Lift.

A Diet Chart is exhibited by W. S. BERTRAM, Bennett Street, St. James's Street; and Feeding Bottles are shown by Mr. E. O. DAY, 78, Waterloo Road, S.E., by GEORGE WELLS, North Street, Westminster, and by THOMAS MARSHALL, 46, Leadenhall Street.

A Naso-Oral Respirator is exhibited by Dr. J. HUNTER MACKENZIE, Northumberland Street, Edinburgh; and Disinfecting and Clarifying Materials are sent by Mr. PETER SPENCE, Pendleton Alum Works, Manchester.

MR. JAMES N. DAVIDSON, Dundee, exhibits a good collection of Medical Dietetic Articles and Pharmaceutical Preparations; and MESSRS. H. P. HAYHOE AND CO., Snowmarket, send samples of a Cleansing Material.

Mr. F. W. BREWSTER, St. Stephen's Club, Westminster, exhibits a new Life-Saving Apparatus (from Drowning).

MESSRS. FOSTER AND GREGORY, Lonesome Chemical Works, Streatham Common, S.W., contribute a good collection of Pharmaceutical Preparations; and a similar collection of the same class of articles is sent by Messrs. J. F. MACFARLAN AND CO., North Bridge, Edinburgh, with a useful selection of Surgical Appliances.

Mr. E. A. SCHNEIDER, Cambridge Villas, Chesterton Road, Cambridge, exhibits a variety of dietetic preparations.

Mr. P. HINCKES BIRD, F.R.C.S., Norfolk Square, W., sends a Disinfectant; and Messrs. G. BRITON AND Co., Castle Street, Holborn, have an assortment of Respirators.

Mr. W. S. MITCHELL, M.A., Rosaville Road, Fulham, S.W., exhibits a compact School Collection for use in teaching the Chemistry of Foods.

Mr. E. SIMPSON, Somerleyton Road, Brixton, S.W., shows Artificial Human Eyes.

Messrs. IHLEE and HORNE, 31, Aldermanbury, are exhibitors of various modes by which luminous paint may be utilised, such as providing luminous ceilings for hospitals, luminous life-buoys, boards for lanterns, leather, cloth, etc.

Messrs. JAMES HOW and Co., Farringdon Street, show an apparatus for estimating urea by means of hypobromite of sodium.

Messrs. POCOCK BROTHERS, Southwark Bridge Road, exhibit several air and water beds, and a model padded room.

Mr. R. R. SCHRAMM, Belmont Street, Chalk Farm Road, exhibits a variety of appliances for the sick-room, crutches, surgical instruments, surgical operation table, and trusses; and the well-known house of SALMON, ODY and Co., 292, Strand, send a good assortment of their excellent trusses.

Invalid furniture and a *post mortem* table are sent by Mr. T. MCILROY, Grafton Street, Fitzroy Square; and Mr. WM. STIDOLPH, High Street, Dartford, exhibits his ingenious institution bedsteads, and bedding.

Messrs. R. J. WINTER and Co., Goodge Street, Tottenham Court Road, send various appliances for the ward and sick-room; and a similar collection is contributed by Messrs. MONK and Co., Great Russell Street, with invalid furniture, and operating chairs.

Mr. J. R. CORSAN, Gray's Inn Road, exhibits an assortment of chemists' fittings, hospital glass, and sanitary tablets.

Messrs. R. W. WINFIELD and Co., Birmingham and Holborn Viaduct, have a good collection of invalid bedsteads and chairs.

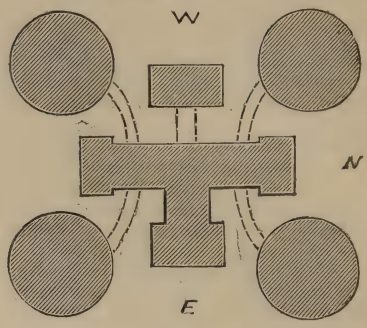
Messrs. ELLIS and Co., Fleet Street, exhibit their portable Cabinet Turkish Baths.

The selection of exhibits by Messrs. MAW, SON, and THOMPSON (Aldersgate Street), is of an exhaustive and varied character, worthy of the character of the firm. It consists of a collection of articles used in the investigation of disease, appliances for the sick room, appliances used for the treatment of the sick and wounded during war, electrical apparatus of comprehensive character, and an extensive assortment of surgical instruments.

MR. HEATON HOWARD, M.R.C.S., Devonshire Road, South Lambeth, contributes an Inflating Nasal Plug.

MESSRS. MOTTERSHEAD AND CO., Exchange Street, Manchester, have an attractive stand well filled with a variety of Medical Dietetic Articles, Batteries, and Chemical Glass.

The pen and ink drawing exhibited by Mr. FRANCIS E. JONES, architect, 20, Cockspur Street, illustrates an hospital on the 'circular ward system' of Professor John Marshall,



F.R.S., adapted to a confined site such as that of University College Hospital. A circular system of wards has already been adopted on a large scale at Antwerp, for the hospital now in course of erection. There, however, the site is practically unlimited. The object of the design now alluded to is to shew the suitability and superiority of circular wards for a confined and enclosed site. The ward towers placed at the four angles of site, fall beyond a line drawn from angle to angle of the cross-shaped administrative buildings, by which they are, therefore, unobstructed as regards light and air; and, in addition, only one point on the circumference of the ward-tower is as near the houses on the opposite side of the street as the whole long side of an oblong ward would be. There is also an uninterrupted view and current of air through three open corridors, the immediately west of the main block of administrative buildings from end to end of the site. The sizes of the circular wards are—internal diameter, 60 ft.; total length of wall, 188 ft.; with 21 beds, floor-space per bed, 134 ft. 6 in., and with wards 15 ft. high, 2017.0 cubic ft. per bed. A similar oblong ward for 20 beds would be about 85 ft. long and 28 ft. wide, or length of wall 226 ft., floor-space per bed 119 ft.; air-space 1785 ft. cube; that is to say, in spite of the 38 ft. extra length of wall, 15 ft. 6 in. less floor-space per bed, and 232 cubic feet less air-space in the case of the oblong ward. The external polygonal shape given to ward towers, is for appearance sake, as well as with a view to economy, owing to the extra cost of 'circular work'; internally the wards to be circular. The ward appurtenances placed on each side of the corridor provide lavatories, bath-room, water-closets, ward-sculleries, sinks, etc. These could be placed in the spandril pieces left at the angles of the site if preferred, unless their too prominent appearance be considered sufficiently detrimental to outweigh the possible advantages of so placing them. Each ward-tower consists of an arched base for coals, heating chamber, etc., and of three independent circular wards of 21 beds each, surmounted by a flat roof available as exercising ground, the portion round the central shaft being possibly glazed for use as a day-room. The towers thus formed are reached from the cross-shaped buildings (in which are all staircases) by open corridors. A main corridor runs the entire length of the long arm of the cross, with small wards, etc., on one side only. This corridor terminates in an operating and clinical theatre on the first floor, and on the ground floor are the entrances for the visiting surgical and medical staffs respectively at either end. In the eastern arm of the cross is the residential accommodation; in the western, wards for cases requiring special isolation. The basement is devoted entirely, with the exception of towers, to the out-patient department; in all, six consulting rooms (top light), two being for special cases

(eye and skin), special waiting rooms, and entrances for male and female patients and for students at each end, casualty room, and dispensary. For further information respecting the advantages claimed for the 'circular ward system', see Professor Marshall's pamphlet read at the Social Science Congress, 1878, and published by Smith, Elder, and Co.

THE CHARITABLE BLANKET COMPANY, LIMITED, Dantzic Street, Manchester, exhibit a variety of their Chartaline Blankets (Henry's Patent), which have achieved a good reputation, the sale having so largely increased as to necessitate the formation of the present company. On hygienic and sanitary grounds they have much to recommend them. They are composed of a layer of wadding between two outer sheets of specially prepared paper, duly perforated for the purposes of ventilation; they are extremely light, warm, cleanly, and very cheap. One Chartaline Blanket is declared by competent authorities to be equal in warmth to two woollen blankets, and at the same time costs but a fraction of the price of the latter. It is almost needless to say that the properties of paper in preventing the too rapid radiation of heat are too well known to render further comment necessary. The Chartaline Blanket is also made and is on view at the exhibition for hospital purposes, having a disinfectant placed between the perforated sheets of paper. While retaining all the other advantages of the blanket, it has the additional merit of containing antiseptic elements. These articles are also made as coverlets for beds, and it is now intended to print and otherwise ornament them, so as to render them as attractive as eider-down quilts, while the cost will be considerably less.

Mr. A. E. FRADELLE, 246, Regent Street, W., contributes an interesting collection of Photographs of Medical Men.

Messrs. LETTS, SON, and Co., Limited, King William Street, E.C., send a good collection of medical ledgers, and diaries, and medical prescription copyists.

Messrs. J. and A. CHURCHILL, New Burlington Street, will exhibit a large collection of the works published by them on the Art and Science of Medicine.

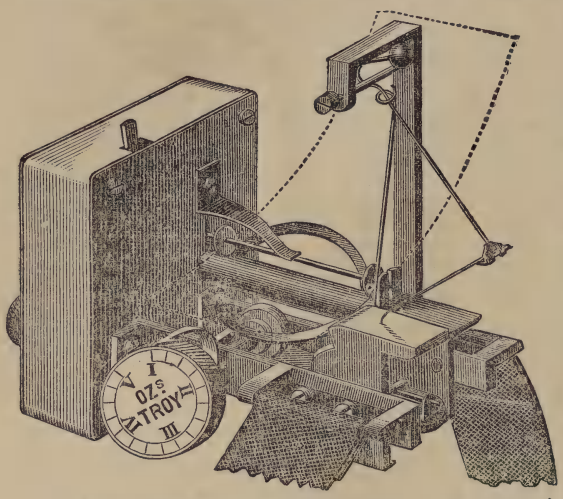
The Silvertown Patent Leclanché Medical Battery will be exhibited by the INDIA RUBBER, GUTTA PERCHA, AND TELEGRAPH WORKS CO., Limited, Silvertown, Essex, and 100, Cannon Street. This Battery has gained a very extensive reputation, gives a constant current of high tension, and is so arranged that its strength may be very easily varied either by increase or diminution, and that the current may be either administered in the constant or intermittent form. It remains in good order for about two years, requiring, meantime, little or no attention, and at the end of that time the manufacturers undertake to restore it to its original usefulness for a similar period at a very small expense. Thus it seems to deserve the favour which it has attained, and it is likely to be of more and more use in proportion as the excellent handbooks on medical electricity now current enable practitioners fully to avail themselves of this valuable therapeutic agent.

MESSRS. SAVORY AND MOORE, New Bond Street, many of whose preparations have a world-wide reputation, make a conspicuous display in an admirably arranged show-case. This firm may fairly claim to have been pioneers in all matters connected with ambulance improvements and aids to military surgery, for which they have received medals at both the London and Paris International Exhibitions, and these appliances form part of their interesting collection. The Medical Field Panniers made by Messrs. Savory and Moore have long been favourably known in the army, and are most useful, especially for detachment service, as they can be strapped on a mule's back with perfect ease. Great improvements have recently been effected in these valuable articles, and they now completely carry out the *multum in parvo* theory; for, although their weight has been greatly reduced, they, nevertheless, contain in separate compartments all necessary instruments, drugs, stimulants, etc., far too numerous to mention here. Perhaps the most ingenious contrivance is the operating table, which can be set up at a moment's notice, being formed from the lids of each pannier, which are double. Another exhibit, of equal merit, is the firm's 'Army Regulation Medicine Chest', a strongly bound box, containing over one hundred drugs, and about sixty articles, from a packet of pins to a stethoscope. On opening the lid of the chest a convenient counter for dispensing is at once formed, and as the whole of the medicines and other matters are arranged on shelves or in compartments, the surgeon can put his hand on what he requires instantly, without any trouble. The Medical Field Companion is another important feature of Messrs. Savory and Moore's stand, and is well adapted for a small party of troops during a 'reconnaissance', or for an exploring party, as, although it weighs under ten pounds, it contains many useful drugs and necessary appliances. There is, in addition, the Surgical Haversack, now used by the army in connection with the new regulations issued to the bearer companies. This is smaller than the Medical Field Companion, and contains all that is necessary for the first dressings of the wounded, and has lately been adopted by the volunteers to be carried by the ambulance orderly when on the march. A series of Medicine Chests of all sizes are arranged round the show case, notably among them being one made by the firm expressly for the Khedive of Egypt, which well deserves inspection. Last, but not least, in this department is the Chemical Cabinet, designed by the late Professor E. A. Parkes, and constructed by Messrs. Savory and Moore, which has been supplied to the Government for use in expeditionary services, and is too well known and appreciated amongst chemists as the 'Parkes Cabinet' to need any further description. Although the display of Appliances for Military Surgery is, perhaps, the most interesting and instructive feature of the exhibition, the other exhibits of this firm, which consist of an artistically arranged assortment of many drugs and preparations, is no less worthy of notice. Amongst these are the Patent Medicated Gelatine Preparations for internal administration, hypodermic injection, and ophthalmic purposes. The gelatine lamels consist of thin pliable and often transparent sheets of uniform thickness, subdivided into squares, each square containing a known quantity of gelatine and a known quantity of some medicine in a concentrated form, so that a waistcoat pocket may contain enough blisters, narcotics, and other medicines to supply a regiment of soldiers or an emigrant ship. The 'Lamellæ Cantharidis' is an excellent form of blister in sheets. Of course the digestive ferments of this firm are shown, consisting of Pancreatin, Pepsin, and Peptodyn, and also their fluid preparations, such as the Neutral Essence and Saline Essence of Pancreatine, and the Elixir and Saline Essence of Pepsine.——Amongst Foods, Messrs. Savory and Moore show two most important and well-known preparations, viz.: their Infants' Food, malted upon Liebig's principles; and also Pancreatic Emulsion, which, as an article of diet in cases of consumption and wasting, is invaluable.——Fluid Meat, a Peptonised Preparation containing the whole of the nutritive constituents of lean meat, is also specially deserving of notice. —— Thirty Varieties of Fluid Extracts of Drugs are also shown on Messrs. Savory and Moore's stand; and their improved Disinfecting Carbolic Acid Vaporiser for disinfecting the air, furniture, bedding, clothes, etc., is a most ingenious and useful little apparatus.

Messrs. MARRATT AND ELLIS, 63, King William Street, London Bridge, E.C., show a case of specimens of their Artificial Eyes, in the manufacture of which they have succeeded in effecting long-required improvements of so advanced and beneficial a character as to render their integral value superior to every prior production of their kind. Of these the most apparent is a transparent aqueous chamber, identical in appearance with that of the natural eye, with which also it is made to correspond, in all cases, in every essential particular. Not the least advantage, however, in practical utility is the extreme hardness of the new material. Impervious to the pungent eye-moisture which was so destructive of previous manufactures, it is said to preserve its brilliance and colour to the last; while its attendant durability, exceeding by at least four to one that of its predecessors, diminishes to more

than the same extent, for obvious reasons, the hitherto considerable cost to the wearer.

DR. DUDGEON, 53, Montagu Square, W., exhibits a Pocket Sphygmograph, two and a half by two inches; weight four ounces. The movements of the artery are conveyed to a steel spring, whose pressure can be raised by an excentric wheel from one to five ounces. No wrist-rest is required, and it can be applied with equal ease, whether the patient is standing, sitting, or lying. The tracings of the needle's movements are made on smoked paper, which

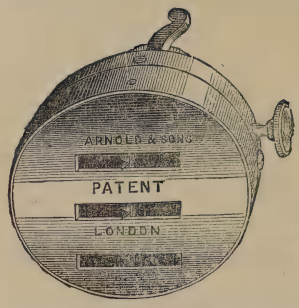


is driven through the instrument by clock-work at an uniform rate. The instrument can be applied, and the tracing made, almost as quickly as the pulse can be felt with the finger. The tracings represent the movements of the artery magnified fifty times. Manufactured by J. Gauter, 19, Crawford Street, W. Agents for the Midland Counties, Messrs. Salt and Sons, Birmingham.

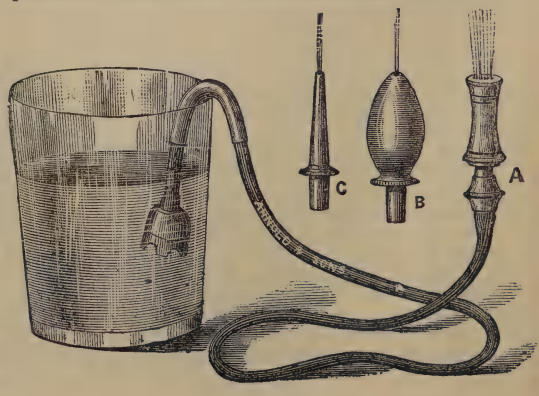
The exhibition is rich in Appliances for the Ward and Sick Rooms. These are exhibited in a variety of interesting features by THOMAS ALLEN, Bristol; ALMONT AND CO., High Street, Stratford; E. J. ALMONT, Stratford Bridge Works; H. BELL, Guildford Street, York Road, Lambeth; Dr. E. DIVER, Yately House, Kenley, Surrey; E. HILTON, Canonbury Road, Islington; JOHN WARD, Tottenham Court Road; and by Mr. J. B. PARKER, Bradninch, Exeter, who shows a new form of Revolving Bed, by which the position of the sick can be changed in any direction, without the least exertion on his part, for cleanliness, change of linen, and for the relief of natural wants. It can also be used for the application of the wet sheet, and the hot-air bath at home. It is likewise adapted for the use of women during their confinements, and for a variety of other purposes, including the safe custody of violent lunatics.

The principal makers in London of dental instruments and specialities are well represented. Messrs. W. and J. JAMIESON, 10, Broad Street, Golden Square, amongst a general assortment of dental appliances, call especial attention to their gold cylinders, blocks, and pellets, a branch of their manufacture with which they have particularly identified themselves. These are shown in a variety of examples, and are shown loose, and to be used as pellets, called Style A., short, compact, but not hard, for use as cylinders only; Style B, crystal elongated cylinders, crystal elongated blocks, crystal blocks, and crystal polygon blocks. Cylinder fittings accompany the cylinders. Messrs. Jamieson claim for their gold, in the form of blocks and cylinders, that it is unequalled for softness and cohesiveness under manipulation, for density when finished, and that it can be adapted to the irregularities of the walls of cavities with greater facility, and also a saving of time by its use. They believe it to be the best gold used in the profession, which, they contend, is supported by the testimonials in their possession. Particular stress is also laid by the firm on their amalgams, of which samples are exhibited.

MESSRS. ARNOLD and SONS, West Smithfield, have a large exhibit of their excellent inventions:—Pocket Clinical Thermometer. Of all the pocket companions now essential to a practitioner, none is more indispensable than a good thermometer. Messrs. Arnold and Sons have attempted to make the scale more legible by colouring it red and indelibly, and the attempt has been successful. The instruments, also, have been carefully tested as to accuracy. The woodcut A shows the thermometer with case attached; C, the instrument without the case; and B, the thermometer case.——Mallam's Instantaneous Vaccinator (Patented). This little instrument

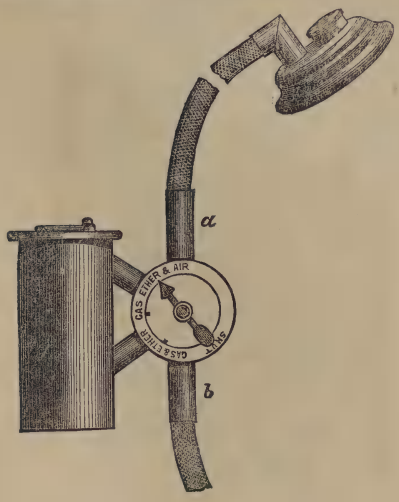


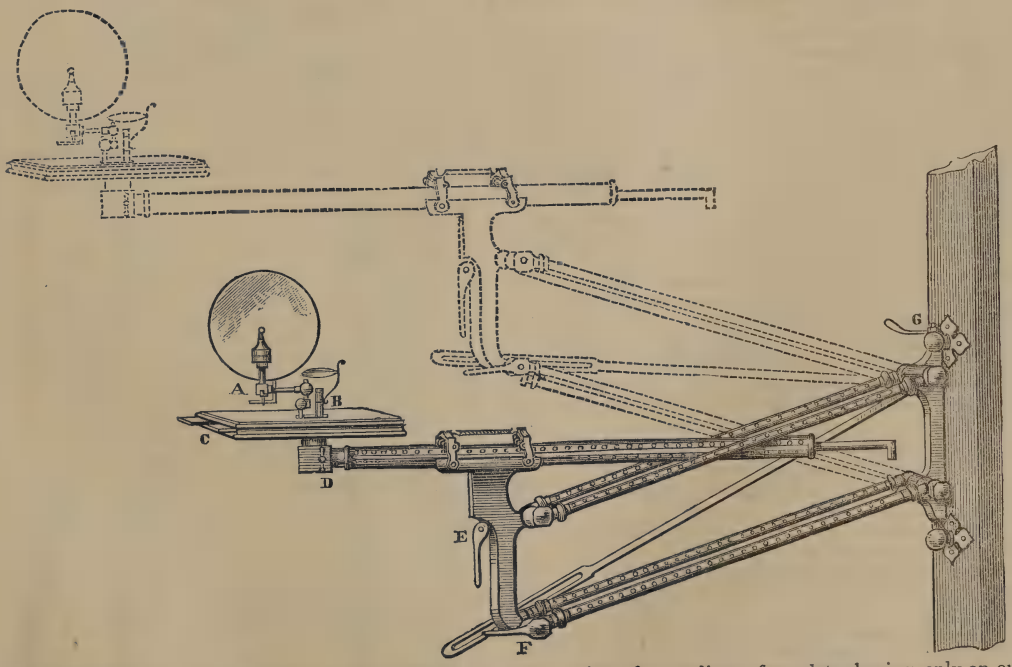
is designed by Mr. Mallam and patented by Messrs. Arnold and Sons, Surgical Instrument Makers to St. Bartholomew's Hospital. The perforated surface is concave, so as to fit the arms of an infant, and the depth of the blades can be easily regulated by a simple screw arrangement. The simplicity of the instrument, together with the celerity with which the operation can be performed, will of itself recommend it to the profession.——Combined Douche for the Eye, Ear, and Nose. This is a modification of the Syphon Douche now in general use. The instrument, as shown in the woodcut, consists of a metallic inlet valve, attached to an India-rubber tube, with a small metallic sheath or covering, to prevent the tube from collapsing over the edge of the glass, and a metallic mount, on which can be fixed an eye-rose, a nasal or an aural douche. In cases of ophthalmia, children over four years of age look upon the



rose-douche as an amusing toy, and will get out of bed and use the douche themselves whilst the nurse is elevating the tumbler of water. The advantage of this arrangement over the old-fashioned method of holding children down by main force, and syringing the eye with a squirt, is at once apparent. The force of the water coming out of the douche, can of course be regulated to a nicety, by raising or lowering the tumbler. The rose-douche marked (A) is also very useful for irrigating wounds, and assists in the removal of dressings. The rose douche (B) may be used to apply an antiseptic or an hæmostatic solution. No harm can be done even to such a delicate organ as the ear by using this kind of douche (C), as the water issues from the nozzle in a continuous stream, and is far more efficacious than an interrupted one. The metal nozzles are much more cleanly than India-rubber, and do not so soon get out of order. It has also been tried, but does not answer, to have the rose made of vulcanite. This simple and useful instrument can be carried in the waistcoat pocket, and is very durable and cheap.——Patent Flexible Throat-Spray. This instrument is an improved form of Spray Producer, which, having a pliable tube, can be readily adjusted, so as to give a spray for the nose, throat, or posterior nares. By this simple arrangement (which is patented) one instrument is made to answer the same purpose, which formerly required three distinct spray-producers. The price is also lower than that of the cheapest vulcanite sprays.

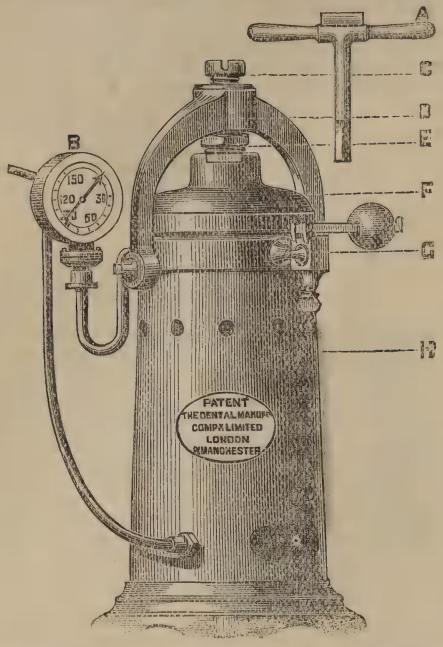
The DENTAL MANUFACTURING COMPANY, Broad Street, Golden Square, Manchester, and Hanley, Staffordshire, and who have just issued the first number of a new monthly, called *The Dental Record*, make an interesting display of their various manufactures. One of the principal of these is their operating bracket, nickel plated throughout, with gas-reflector attached, and of which we





append an illustration. This bracket is pronounced as the most complete, useful, and elegant operating bracket at present before the dental profession, and is the only one adapted for gas. It has plain and Bunsen flames. It has an extension of 2 feet 9 inches when at its shortest, and 4 feet when at its longest distance from the wall. It has a vertical range of 19 inches, is instantaneously fixed in any position by a short lever, and requires the use of one hand only. It has the fullest lateral movements that can be obtained in any bracket. Having been designed for gas, it enables us to adopt a reflector for operating with at night or on dark days; an arrangement much neater than a separate reflector, and at the same time more convenient, as it gives the operator a table for his instruments and gold, and a Bunsen burner and annealing tray. If desired, however, both the burners may be removed (by simply unscrewing), and a spirit lamp inserted into the recess in the table. Spirit lamps will be supplied for those who have not the convenience, or do not desire to use gas. Another appliance, which we also illustrate, is an apparatus for the administration of nitrous-oxide gas and ether. It consists of an ordinary face-plate, having only an outlet valve, which can be closed by a twist of the finger and thumb, an indianette bag, of about three gallons capacity, and the part as in the illustration. This latter is of novel construction; it has in communication four tubes, two passing to the cylinder at the side, which contains sponge saturated with ether; A passes to the face-piece, and B to the gas-bag. The handle of the tap has an indicator, pointing to words on the side. In use, the instrument hangs in front of the patient, about a foot from the

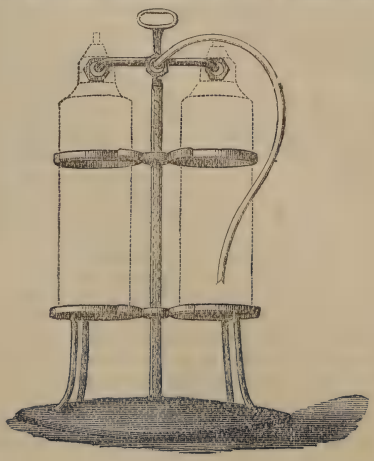
mouth, or may be attached to the person of the operator. The B form of the company's patent safety combination vulcaniser and press, for celluloid and rubber, is likewise shown. This has been patented in most continental countries, and in America. It is alleged of this, that it is the most perfect apparatus for its purpose, yet designed. It



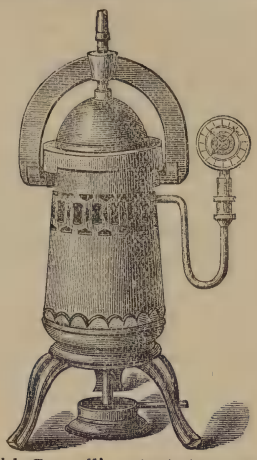
is strong and well made, has no complicated machinery to get out of order, and the self-acting gauge perfectly controls the supply of gas at any point between 10lbs. and 150lbs.; therefore, celluloid or any kind or thickness of rubber may be vulcanised accurately.

MESSRS. SMALE BROTHERS, Great Marlborough Street, have also an excellent assortment of dental instruments, tools, and appliances.

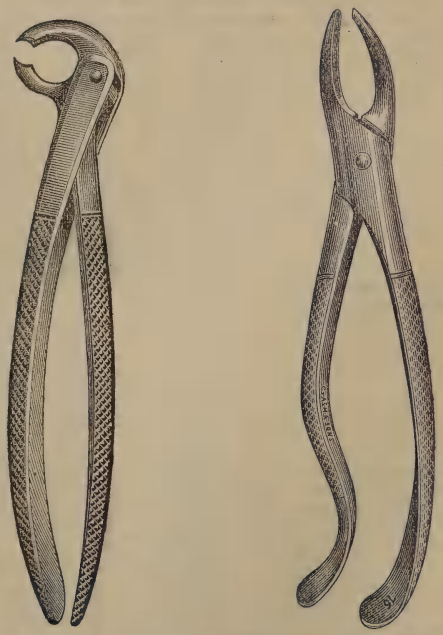
MESSRS. CLAUDIUS ASH AND SONS, Broad Street, Golden Square, are extensive exhibitors of dental appliances, and in one or two features connected with this profession they undoubtedly stand pre-eminent. Of mineral teeth and dental rubbers they are, we believe, the largest makers in Europe; and the perfection, as regards colour and general appearance, to which they have succeeded in bringing their pink or coral-colour rubbers, is probably unequalled. Noticeable amongst the 'appliances', is Napier's portable gas stand for liquid gas bottles, which



we illustrate. This apparatus will hold two bottles of liquid gas—which are secured in position by rings and wedges—and is fitted with a double union which connects both bottles with the face-piece. By this arrangement the bottle in use can be entirely emptied without fear; for, should there be not sufficient gas in it to complete an operation, it is only necessary to turn on the other bottle. After the operation is completed, if another full bottle is not to hand, the double union can be removed, and the union of the Cattlin's bag fixed to the remaining bottle while the empty one is being refilled. The stand is made of iron, bronzed, and the unions of gun metal, the whole being light and portable. The ordinary gas-key can be used, but if desired, an improved key is supplied with the stand, 14 inches in length, which enables the operator to turn the gas on or off without stooping. Their portable vulcaniser is another appliance to which they call attention.



This is fitted with Gartrell's patent steam-pressure and gas-regulating gauge, but in its other features is somewhat similar to other vulcanizers. Their display of dental tools is unique and interesting, and they are particularly strong in the article of forceps, which they manufacture of every



conceivable shape and size. Morrison and White's gas engines, dental chairs, Stewart's improved reflector,

mineral teeth of all kinds of shades, sizes, and lengths, dental rubbers, and the usual adjuncts for the dentist's use figure amongst this excellent display.

Messrs. JAMES ALLEN and SON, Marylebone Lane, exhibit a number of appliances for the sick-room, of their manufacture, including medical baths, vapour-baths, bronchitis-kettles, &c.; and appliances for the sick-room are also sent by Messrs. EDWARDS and BRADLEY, 266, South Lambeth Road. A similar class of exhibits, including a collection of surgical instruments, are shown by Messrs. EVANS and WORMULL, Stamford Street, Blackfriars; and Messrs. A. E. FARMER and Co., 17, Devonshire Square, Bishopsgate, exhibit pharmaceutical preparations in connection with sick-room appliances. BATTLEY and WATTS, 32, Lower Whitecross Street, FLETCHER and FLETCHER, North London Chemical Works, Holloway, GALE and Co, 15, Bouverie Street, MARTINDALE, New Cavendish Street, T. and H. SMITH and Co, 12 Worship Street, ZIMMERMANN and Co., 21, Mincing Lane, BURGOYNE, BURBIDGES and Co., Coleman Street, PAUL METZ, Jewin Street, Cripplegate, and T. MORSON and SON, Southampton Row, W.C., all exhibit collections of pharmaceutical preparations, drugs, chemicals, etc.

The collection of Surgical, Electrical, Chemical, and Ophthalmic Instruments and Appliances is not extensive but of a high order of merit, and embraces all the leading names in addition to the few we have already mentioned in each of these branches of manufactures: Messrs. JAS. COXETER and SONS, Grafton Street East, show both surgical instruments and electrical apparatus; Mr. W. GROVES, Bolsover Street, medical batteries; Mr. DAVID MARR, Little Queen Street, W.C., surgical appliances, surgical instruments, microscopes, and steam-spray producers, the last-named a speciality with Mr. Marr; MAYER and MELTZER, Great Portland Street, surgical instruments; Mr. J. B. THISTLETON, Old Quebec Street, electrical and physiological apparatus; TOWNSON and MERCER, Bishopsgate Street, chemical apparatus, and graduated instruments; JOHN WEISS and SON, Strand, electrical and surgical instruments; J. L. PULVERMACHER, Regent Street, W., electrical instruments; WILLIAM RUSSELL, George Street, Portman Square, surgical instruments; SALT and SON, Bull Street, Birmingham, surgical instruments; W. H. BAILEY and SON, Oxford Street, surgical appliances; HY. CROUCH, Barbican, microscopic and ophthalmic apparatus and optical instruments; A. A. DAVIS, Buckingham Road, Southgate Road, N., microscopes and optical instruments; DONKIN and VECQUERAZ, Tabernacle Walk, Finsbury, electrical apparatus; A. W. GERRARD, Liverpool Road, N., medical apparatus; J. B. MEDLAND, Borough High Street, London Bridge, microscopical apparatus; MILLIKIN and DOWN, St. Thomas Street, Borough, surgical instruments; ROBINSON and SON, Wheat Bridge Mills, Chesterfield, surgical appliances; P. W. SEYMOUR, Guy's Hospital, electrical apparatus; JAMES SWIFT and SON, University Street, microscopes and microscopical apparatus; F. A. DARTON, St. John Street, West Smithfield, surgical and physiological instruments; and ROSS and Co., 164, New Bond Street, microscopes and optical instruments.

Messrs. BURROUGHS, WELLCOME and Co., of 7, Snow Hill, exhibit the following preparations:—Wyeth's Compressed Peptonic Tablets. The introduction of a convenient mode of administering pepsin and other digestive ferments has long been a desideratum. Of the value of pepsine and pancreatine in the treatment of the various forms of dyspepsia there can be no doubt. Each of these tablets represents the full medical activity of twenty grains of pepsine and pancreatine. They are elegant in appearance, and from their peculiar form can be swallowed without difficulty.——Kepler's Malt Extract.—The value of extract of malt as a medicinal agent is as yet hardly fully appreciated. Kepler's extracts are generally liked by patients, and are often taken readily when other forms are not retained. It is a good plan to begin with a teaspoonful three times a day, but the dose may be rapidly increased to a tablespoonful or more. One of the best vehicles for taking the extract of malt is a little warm milk, but some people prefer it alone, whilst others like it with soda-water. It speedily improves the powers of assimilation, and in cases of consumption, scrofula, and many of the wasting diseases of children a wonderful improvement in the patient's condition may be noticed after even a fortnight's treatment. The introduction of Kepler's extract of malt is a decided advancement in therapeutics.—— Wyeth's Compressed Tablets of Chlorate of Potash.—These are a great improvement on the pharmacopœial lozenge. They are extremely useful in removing the huskiness in the throat from which so many public speakers unfortunately suffer. To clergymen, lecturers, and public singers, they are invaluable. In tonsilitis and in the enlarged tonsils of children, they may be given with confidence. Each tablet contains five grains of chlorate of potash.——Burroughs' Beef and Iron Wine.—This is an excellent preparation, and is a great improvement on the vinum ferri of the *British Pharmacopœia*. For convalescents from acute illnesses it is an admirable restorative. For dwellers in large towns who are unable to make a good breakfast, a tablespoonful in a little water about eleven o'clock, with, perhaps, a dry biscuit, will be found most useful. It is well adapted to the treatment of children suffering from rickets or general mal-nutrition. Each fluid ounce contains the nutritive value of two ounces of beef with four grains of citrate of iron.——Wyeth's Dialysed Iron.—This is a neutral solution of oxide of iron in the colloid form, obtained by endosmosis. It has the great advantage over most other preparations of iron that it has no unpleasant smell or taste and does not irritate the stomach. It may be given with confidence when other forms of iron disagree. In anæmia and chlorosis it may be regarded as a specific, and in many cases of what may be called malignant anæmia it is certainly most beneficial. It is the best antidote we possess for poisoning by arsenic. ——Wyeth's Compressed Soda-Mint Tablets.—Each tablet contains four grains of bicarbonate of soda, a quarter of a grain of carbonate of ammonia, and a sixth of a drop of oil of peppermint. They are well adapted for cases of dyspepsia with flatulence, acidity, and heartburn. The soda and carbonate of ammonia act as antacids, whilst the antiseptic action of the peppermint checks butyric acid fermentation.——Fellows' Hypophosphites.—Fellows' syrup of hypophosphites contains the hypophosphites of iron, quinine, strychnia, lime, manganese, and potash. The phosphorus is so lightly combined with the bases that it is equivalent to free phosphorus. This preparation is largely prescribed in what is commonly called 'general debility', and it is especially useful when the debility has arisen from sexual excesses or some functional derangement of the reproductive organs. In the languor which often follows too frequent seminal emission it is highly recommended. It is the best form in which to give the hypophosphites to obtain their constitutional effect.—— McKesson and Robbins' Capsuled Pills.—These beautiful little pills are certainly worthy of attention, and are a wonderful improvement on the old-fashioned bolus. Being oval in shape and completely covered, they may be taken by even the most fastidious patient without the slightest difficulty. That they are active we have abundant evidence. The introduction of bisulphate of quinine is certainly a novelty. On breaking open one of the phosphorus and nux vomica pills, the smell of phosphorus is very perceptible, and in a few minutes distinct fumes can be seen rising from the pill mass. The sulphide of calcium pills will be found most useful in boils and carbuncles, and in the treatment of scrofulous glands in the neck. Messrs. Burroughs and Wellcome are the European agents.—— The Burroughs Hazeline.—Hazeline is a clear pellucid fluid, containing in a concentrated form the active principles of Hamamelis Virginica, the American Witch Hazel. It is largely employed for arresting venous hæmorrhage, and proves equally efficacious whether the blood comes from the nose, lungs, stomach, bowels, or other organ. It is especially indicated when the blood comes up easily and the bleeding is not attended with any expulsive effort. It has been used with success in cases of dysentery when there is much blood in the motions. In the treatment of bleeding piles it is almost a specific. It is given internally

in fifteen-drop doses three or four times a day, and is also used as a local application. It is useful in many affections of the mucous membranes.

HUNYADI JANOS, exhibited by the APOLLINARIS COMPANY, Limited, 19, Regent Street, London, S.W.—This is an aperient natural mineral water from the Hunyadi János Bitter Salzquelle, Buda-Pesth. It is the type of a good aperient water, containing as its chief elements sulphate of soda and sulphate of magnesia. These it contains to an extent far beyond that of the waters previously in use, and which it has largely superseded, such as Püllna, Friedrichshall, etc. In addition to its great richness in these aperient salts, it has the advantage of the natural combination with the carbonate and chlorate of sodium, and of containing a considerable amount of free carbonic acid; conditions which, as Dr. Schwartz has observed, greatly increase the tolerance which the system shows to this aperient water, and must render it more palatable than other bitter waters. Its use had attained extraordinary proportions in Germany before its reputation reached this country; the amount sent from the springs having risen from 40,000 bottles in 1863 to 1,500,000 in 1875. Since that time it has won the approval of the medical profession throughout Great Britain, France, and America, and it has helped to initiate an important therapeutic movement which is now in progress in this country, in the use of very much smaller doses of the saline aperients than had previously been the practice. Therapeutists such as Prof. Macnamara, Prof. Aitken, and others have noted with surprise how remarkably constant, gentle, and valuable an effect may be obtained by the use of the relatively small doses of sulphates and chlorides, with carbonic acid, contained in half a wineglass to a wineglassfull of Hunyadi János water. The former dose is adequate for all ordinary purposes if taken at night; while a wineglassfull taken in the morning, mixed with either warm water or taken in a little hot milk, which completely covers its flavour, suffices to produce a rapid painless aperient action. It appears to be tonic rather than debilitating to the intestine, and powerfully aids in relieving the hepatic and splenic organs and relieving internal congestions. The uses of Hunyadi János are too numerous to be here enumerated, and extend over the whole series of congestions of the viscera; the gout, rheumatic and obese diatheses, habitual constipation, whether in adults or in children; and all diseases which require the use of a moderate evacuant tolerably rapid and yet safe in its action.

APOLLINARIS WATER—APOLLINARIS COMPANY, Limited, 19, Regent Street, London, S.W.—Not very much need, perhaps, be said of a water which has now become a household word throughout the civilised world. Apollinaris Water springs from a deep rocky source at the Apollinaris Brunnen, Artheil, Rhenish Prussia. This source is alike unparalleled for its outflow of mineral water, and for its richness in carbonic acid gas. The measured outflow of water, carefully ascertained and certified by scientific experiments, amounts to 300 litres every four minutes, equal to 144,000 quarts daily, or 40,000,000 bottles yearly, being four times as much as the quantity of water actually used for bottling, which, according to the official statement, amounts to 10,000,000 bottles yearly. The quantity of carbonic acid gas (as reported by G. Thilenius, president of the Balneological Section of the Medical Society of Berlin, April 19, 1879) exhaled from the spring is so great that, notwithstanding all precautions to prevent its escape and preserve the whole of the gases for bottling purposes, it is impossible in calm weather and with medium barometric pressure to prevent the escape of such a quantity of gas as prohibits too near approach to the opening of the spring. The water is bottled extensively with its own natural gas, and by a method devised in 1852 by Professor Bischof, and described by Thilenius in his paper, as well as by Kekulé and Hofmann, as most satisfactory, since it supplies the water in bottle with the exact proportion of its own gas as it exists in the spring at the depth of 60 feet from the surface whence the water is taken. In order to utilise the richness of the spring in carbonic acid gas the water intended for consumption is drawn off at a depth of 60 ft. below the surface, a depth equal to three atmospheric pressures, and is bottled with a quantity of its own gas drawn from the spring exactly equivalent to that which the water contains at the depth at which it is drawn. Professor Thilenius speaks in this report with surprise and admiration of the minute care and of the 'grandiose' liberality with which the operations of bottling are conducted at the spring, the whole organisation being arranged in such a manner as to ensure the most perfect results. The mean analyses of the spring most recently made by MM. Bischof, Kyll, and Mohr, are :—

Carbonate of Soda	0.9555
,, of Magnesia	0.3775
,, of Lime	0.2608
Chloride of Sodium	0 3765
Sulphate of Soda (Glauber's Salts) ..	0.2128
Oxide of Argillaceous Iron	0.0175
Silicated Acid	0.0137
	2.2043

Apollinaris Water has been described by Dr. Balthazar Foster, as 'without a rival'. This was practically the case when it was first introduced on so extensive a scale into England, France, and America, as a pure table water *par excellence*, or, as it has been more picturesquely called, 'the queen of table waters'. The remarkable success achieved and the universal favour with which Apollinaris was regarded by physicians throughout the world, and by the public generally, as a new element in daily dietetics, and as a means of substituting a pure, most pleasant and healthy table drink for the alcoholic liquors which have been gradually falling in public estimation, have led to the introduction into the market of a great number of competitors. Apollinaris remains not only at the head of the list, but must be regarded as an enterprise entirely without parallel in the history of mineral waters for its extent, completeness, and the great capital invested, and for the high scientific sanction under which the bottling at the well has been conducted, including the personal investigations and reports of such men as Oscar Liebreich, Hoffmann, Kekulé, Odling, in concert with Frankland, Bischof, Virchow, and others. Imitation is the sincerest flattery, and this compliment has been paid to the Apollinaris Water by a host of competitors, many eagerly imitating its mode of bottling, the appearance of its labels, and the especial recommendations which have been given to it by the most eminent authorities throughout the world. The sale of Apollinaris is stated to exceed that of all the other German mineral waters put together. Its use in hospitals is considerable, and is steadily increasing. It was in England where the luxury and high hygienic value of an absolutely pure and pleasant table-water was first adequately appreciated, and that Apollinaris first achieved its great success. Other nations have learnt the lesson and confirmed the verdict, and Apollinaris enjoys now a cosmopolitan reputation of the highest kind.

The exhibitors of mineral and other waters, independent of those we have already named, are numerous, and amongst them is THE MALTINE MANUFACTURING Co., Limited, Great Russell Street, W.C., with the Victoria Bitter Water, and their well-known preparation of Maltine; THE HARZER NATURAL MINERAL WATERS Co., Limited, London Wall, THE GEROLSTEIN WATER Co., 17, Philpot Lane, THE ÆSCULAP BITTER WATER Co., Saracen's Head Buildings, Snow Hill, THE ARSENICAL WATER Co., of Court Street, ETIENNE, Brabant, Belgium, T. T. HIRST and Co., 11, Queen Victoria Street, THE BELLTHAL BRUNNEN Co., 3, Crown Square, S.E., W. R. STEVENS, Flitwick Mineral Springs, near Ampthill, Beds, E. GALLAIS, Margaret Street, Regent Street, ALEXANDER JAMIESON, St. Mark's Crescent, Regent's Park, MOORHOUSE and Co., Hulme, Manchester, and THE GENOVESE MINERAL WATER Co., 3, Great Tower Street.

MR. VAN ABBOTT, 5, Princes Street, Cavendish Square, exhibits a variety of dietetic preparations, including Prepared Taraxacum or Dandelion Powder, to be used as a diet drink by

those suffering from torpid liver, indigestion, scrofula, etc., either alone or mixed with coffee. It is also a good wholesome tonic for adults and children.——Chocolate, with Liebig's Extract of Meat, in cakes, sticks, and lozenges, with or without sugar. Particularly suited for phthisical or debilitated patients, and especially for travellers, as it enables them to carry in a small compass a wholesome and strengthening meal, as the chocolate is good for either eating or mixing.——Callard's Ivory Jelly for Invalids, with or without sugar. This jelly, which contains phosphates in notable quantity, is prepared from ivory, is very delicate in flavour, and well adapted for invalids.——Acorn Coffee or Café de Glands. A very useful preparation for children and invalids, particularly those suffering from indigestion, scrofula, or inefficient nourishment of the system. It is a good tonic, and can be used either alone or mixed with ordinary coffee.——Specially prepared Clear Ox-Tail Soup, for invalids, without vegetables, farinaceous substance, or gelatine. —— Preparations for Diabetics, etc.:—1. Real Turtle, Mock Turtle, and Ox-Tail Soups. Free from starch, and as free as possible from fat and seasoning; excellent in quality and flavour. 2. Extract of Vegetables, for flavouring Extract of Meat, Soups, Gravies, Hashes, etc. A remarkably well-flavoured and powerful essence. A few drops give quite an appetising taste to beef-tea, broth, etc.——Gluten Macaroni. Used the same way as ordinary macaroni, but without sugar, in puddings.——Gluten Flour, for diabetes, debility, indigestion, and corpulence. —— Gluten Vermicelli, which may be used for broth and soups, without sweet vegetables, as carrots or turnips, etc., and puddings without sugar.——Gluten Semola, for debility, diabetes, indigestion, etc.——Bran Gluten Biscottes. This bread is said to be superior to any other form hitherto produced for the use of diabetics.——Gluten Chocolate without Sugar.——Whole Wheat Meal Biscuits, without Sugar. ——Dietetic Extract of Vegetables, for flavouring Liebig's Extract of Meat, Soups, Gravies, Hashes, etc.——Hypophosphite of Lime Biscuits, for delicate children, especially those suffering from deficiency of bone, weak joints, or debility. Each biscuit contains five grains of the hypophosphite of lime.——Dietetic Bran Biscuits for Dyspepsia, etc. Mr. Van Abbott is so well known in connection with invalid cookery, and particularly in catering for diabetic patients, that his preparations will be inspected with considerable interest by the profession.

MR. BONTHRON, 106, Regent Street, who has well identified himself with diabetic cereal foods, exhibits his various specialities in the form of Bread, Biscuits, and Powder for Diabetic Patients. Speaking of these foods, Dr. Pavy, in his recent work on Diabetes, p. 245, says:—'Mr. Bonthron, of 106, Regent Street, has recently succeeded in producing some Gluten Biscuits and Bread which are more eatable than anything of the kind I have ever yet met with. The biscuits present somewhat the character of a cracknel; they eat short and crisp, and are readily reducible in the mouth, have no unpleasant taste, and, consumed with other food, possess the power of cleansing the palate. The bread is moist, and will not keep good for more than about ten days. Its consumption, therefore, involves a frequent supply. It serves to increase the variety at the command of the diabetic; and, independently of this, possesses the advantage of presenting an approach to the condition of ordinary bread.' Mr. Bonthron has recently brought out a new Bran Biscuit, which he shows here for the first time, and which has a decided improvement in taste over any that have preceded it. He alleges that he has treated the bran in an entirely different manner. All silica and bitterness or tannin are entirely eradicated; the biscuits are short and crisp to the taste, and appear not at all unsuited for general purposes, as well as for the diabetic patient.

PEPTONISED MILK.— The whole current of medical and chemical research has of late years tended to show in an increased degree the value of the introduction of peptonised elements into the diet where it was desirable to give easily digested food. The Lumleian Lectures of Dr. W. Roberts, F.R.S., in 1880, called attention very prominently to the advantage of the use of milk-peptone in nurseries as an infant diet in sickness, and sometimes also in health. The object is to change the casein of the milk into peptone without materially altering the flavour and appearance of the milk. This process, for which Dr. Roberts gives careful indications, is one which can only be carried out successfully by a skilled chemist, and with the aid of a properly fitted laboratory. Both these requisites the AYLESBURY DAIRY COMPANY possess in a most perfect degree; and hence, having also an expensive organisation for the purpose of the daily delivery of milk, they are enabled to supply peptonised milk from day to day, where required, to perfection, and at a cost which brings it within the reach of all.

WHEY.—Whey, like other milk products, requires to be carefully and scientifically prepared, in order to meet the necessities of medical practice. The whey supplied by the AYLESBURY DAIRY COMPANY is prepared under the superintendence of Dr. Vieth, and is made without acid, and free from fat and casein. The whey thus prepared contains the valuable mineral ingredients of milk in full quantity, the chlorides being very greatly increased in proportion. The salts in milk include 67 per cent. of phosphates to 33 per cent. of chlorides; on the other hand, the salts in whey contain 40 per cent. of phosphates to 60 per cent. of chlorides, a dietetical indication which at once explains much of the special value of whey in medical treatment.

Medical Dietetic Articles are sent by the popular firm of BRAND AND CO., Little Stanhope Street, Mayfair; by H. and T. KIRBY and Co., in combination with medicine cases and pharmaceutical preparations. Mr. JOHN W. RICHARDS, Great Russell Street W.C., sends a collection of medical dietetics; Messrs. SOUTHALL BROTHERS and BARCLAY, Birmingham, contribute an assortment of surgical dressings, splints, and medical dietetics; EVANS, LESCHER, and WEBB, Bartholomew Close, have a miscellaneous collection, consisting of numerous drugs, lime fruit drugs, and cordials, Materia Medica Cabinet, and medical envelopes; concentrated food is shown by GEYELIN AND CO., Belgrave House, Argyle Square, W.C.; M. and LEOPOLD HOFF, 3, Charterhouse Buildings, exhibit the different medical dietetic articles that have become connected with their name; KOPF'S EXTRACT OF MEAT CO., Limited, Draper's Gardens, are present with their dietetic specialities, and a further collection of dietetics is contributed by Messrs. E. CHAPMAN and Co., Duke Street, Portland Place. THE BRITISH SIPHON MANUFACTORY, Gresham Buildings, Basinghall Street, show an assortment of syphons and seltzogenes for ærated waters; and Dr. ROBERT LEE, Savile Row, W., sends an inhaler. Dr. CHARLES RENNER, Portsdown Road, Maida Vale, shows specimens of calf-lymph; and the various preparations of vaseline are shown by the CHESEBROUGH MANUFACTURING Co., Holborn Viaduct; JEYES' SANITARY COMPOUNDS Co., Limited, Bishopsgate Street, send their soaps and disinfectants; Mr. EUGENE RIMMEL, of the Strand, exhibits some pretty aromatic vaporizers and disinfectants; and CONDY'S FLUID Co., Falcon Street, E.C., send an assortment of their popular disinfectants.

FOREIGN EXHIBITS.

THE following is the list of foreign exhibitors, and of the articles they purpose sending. We shall notice them critically in a future number.

J. BROCKER, Utrecht, Holland, sends a Stupe of Flax.

Dr. JEAN BUFALINI, Siena, Italy, contributes a Plessimeter.

C. H. BURK, Archiv Strasse, Stuttgart, exhibits a collection of Pharmaceutical Preparations.

Signor ARISTIDE CONTI, Castrocaro, Florence, Italy, exhibits a variety of Chemicals.

W. F. W. ECKELL, Christiana, Norway, exhibits a group of Medical Dietetic Articles of native manufacture.

J. H. DE BASSY, Spnisstraat, Amsterdam, sends a variety of Splints.

Dr. MARONE EMMANUELE, Campobasso, Italy, shows an Auto-Stethoscope.

Messrs. GANERNACK and REINBOTH, Louisenstrasse, Dresden, contributes some Electrical Apparatus.

W. J. HAUCK, Kettenbrücken Gasse, Wieden, Vienna, exhibit an interesting assortment of Optical Instruments and Physiological Instruments.

MAX KAHNEMANN, Spandauer Strasse, Berlin, sends an Apparatus for Antiseptic Treatment and a collection of Surgical Bandages.

Dr. GIAMBATTISTA LAURA, Via Cavour, Turin, is present with an interesting collection of Microscopic Sections.

JOSEF LEITER, Mariannen Gasse, Vienna, shows Medical Appliances of a varied character.

EDWARD LIPOWSKY, Heidelberg, sends Appliances for the Ward and Sick Room.

Professor PIETRO LOVETA, Bologna, Italy, sends a Cystotome.

Messrs. R. and H. MATHIEU, Fils, Boulevard St. Germain, Paris, will have a case of Surgical Instruments of French manufacture.

EMANUEL MERCK, Darmstadt, Germany, sends a collection of chemicals.

American Dietetic articles will be contributed by Messrs. J. and L. MURDOCK, Boston.

M. NACHET, Rue St. Severin, Paris, sends Microscopes and Physiological Instruments.

Dr. FRANCESCO OLIVETI, of Naples, sends a collection of Obstetric Instruments.

The International Society for the Manufacture of Wound-Dressing Materials, Schaffhausen, Switzerland, have an assortment of Antiseptic Surgical Dressings.

Mons. A. TRIPIER, Rue de Hanovre, Paris, sends some plans for the Ventilation of Theatres.

Dr. VAJDA, Nagler Gasse, Vienna, sends an Urethral Irrigator.

H. WINDLER, Dorotheen, Strasse, Berlin, has a collection of Physiological Apparatus.

BÆKMANN and BURMESTER, Stockholm, shows a collection of Medical Apparatus.

CARL BERG, Manteuffel Strasse, Berlin, has an assortment of Chemical Apparatus.

Turkey will be represented by J. CAUZUCH, Grande Rue de Pera, Constantinople, with an assortment of Pharmaceutical products.

The GODESBERGER MINERAL WATER CO., Market Platz, Bonn, Germany, will exhibit their Mineral Waters.

W. J. HAUCK, Kettenbrücken Gasse, Vienna, send Inhalation Apparatus.

Dr. ISENSCHMIDT, Sophien Strasse, Munich, Bavaria, sends a Model of the Larynx for Teaching.

H. KAPPELLER, Jun., Kettenbrücken Gasse, Vienna, has a collection of Clinical Thermometers and a Urinometer.

American Surgical Instruments are to be sent by D. W. KOLBE and SON, Arch Street, Philadelphia.

HEINRICH KARL, Olmutz, is present with his Pharmaceutical Preparations.

Professor LABUS, S.S. Andrea, Milan, sends a Model for Laryngoscopic Operations.

Dr. LANDOLT, Rue Volney, Paris, sends a Telemeter.

J. PAUL LIEBE, Dresden, contributes a collection of Medical Dietetic articles.

EDWARD LOEFLUND, Stuttgart, will show a sample of Malt Extract.

ERNEST RUCHONNET, Romanel-sur-Lausanne, Switzerland, sends a collection of Mineral Waters.

VICTOR SCHMIDT and SON, Albe Gasse, Wieden, Vienna, will show a collection of Drugs.

Dr. W. A. SEDLITZKY, Salzburg, Austria, sends various Pharmaceutical Preparations.

Dr. TARTENSON, Rue de Chateaudun, Paris, exhibits various Pharmaceutical Preparations.

A variety of Dental Instruments and Appliances is sent by Mr. S. S. WHITE, Chestnut Street, Philadelphia, U.S.A.

Appliances for the Ward and Sick Room are shown by Dr. BARDA, 49, Rue Blanche, Paris; and Pharmaceutical Preparations are exhibited by G. PR. CHIMICA BARONI, Modena, Italy, by ARTURO D. CIULLINI, Dicomano, near Florence, and by W. H. SCHIEFFELIN AND CO., New York.

Surgical Instruments are shown by WILHELM DEICHE, Dresden, by EDWARD MESSTER, Friedrich Strasse, Berlin, and by C. WATTER BIONDETTI, Bâle, Switzerland.

A very useful case of Medical and Surgical Apparatus for use in cases of railway accidents is exhibited by the COUNCIL OF THE ROYAL HUNGARIAN STATE RAILWAY, Buda Pest.

Medical Apparatus is contributed by Dr. LOUIS GRÔSZ DE CSATER, Universitäts Gasse, Buda-Pest; and a collection of Artificial Legs is sent by C. GEFFERS, Schiff bauerdam, Berlin.

AUGUST WEMSCH, Worms-on-Rhine, exhibits an Inhalation Apparatus.

MISCELLANEOUS SECTION.

The foreign exhibits in this section will consist of a book from Dr. FRANCIS HOEBER, Bad-Homburg, near Frankfort-on-Maine; a collection of the same from EDWARD LIPOWSKY, Heidelberg; Dietetic Articles from AUGUST PLANCK, Getreidemarkt, Vienna; Books from Dr. THANLOW, Modums Kuranstalt, Norway; and from Dr. F. VALLARDI, Via Disciplini, Milan, Italy.

The Preparations of Meat-Juice by Mr. MANN S. VALENTINE, Richmond, Virginia, U.S.A., will be exhibited by Messrs. CORBYN, STACEY and Co, High Holborn. This extract of meat has been in use for some few years in the States, but has not as yet been brought into that prominence in the United Kingdom that its merits appear to deserve. Dr. Oscar Liebreich, Professor of Materia Medica in the University of Berlin, and Dr. Rudolf Virchow, Professor of Pathology in the same University, speak of it in the highest terms. These gentlemen say, amongst other things, that, 'the colouring matter of the muscles which, as is well known, is identical with the colouring matter of the blood, is retained in the preparation in a completely unchanged condition, as in no other meat extract known to us. The Meat-Juice contains also a certain quantity of albumen in solution'. After observing that the samples in their possession had undergone no perceptible change for four months, they add, 'Provided, therefore, that "Valentine's Meat-Juice" is so produced as to continue to retain its original purity, it is to be regarded as a real acquisition to the dietetic remedies prepared for sanitary purposes.' The judges of the International Exhibition at Philadelphia, 1876, said: 'It more nearly represented fresh meat than any other extract of meat', and some of our own leading professional journals speak of it in similar terms. A two-ounce bottle, of which we append an engraving, contains the equivalent of a pint and a half of the ordinary extract of beef. Mr. Valentine informs us that he uses only the flesh of selected cattle of the choicest Durham stock found in West and South-West Virginia, of an average weight of 1,500 lbs., that he often slaughters 10,000 lbs. of beef daily, and that his expenses might be reduced some thousands of dollars monthly, if he used a coarser grade of stock, which he will not consent to do.

MISCELLANY.

FATAL RESULTS FROM THE BITE OF THE BLACK SPIDER.—Doctor Dax of Sommières relates six persons bitten by the *Latrodeclus tridecim guttatus* of Rossi, a somewhat rare large species found in Provence and Languedoc. All the patients showed the following symptoms in a more or less marked degree: first, uneasiness, headache, and weakness; then dyspepsia, rachialgia, cramps, and tinglings, with coldness of the extremities; in one case only the symptoms became for a time alarming. Cure was obtained in all the cases at the end of twenty-four hours by the exhibition of ether and diffusible stimulants.

The London Medical Record.

THE HUGHES INDUCTION-BALANCE AND THE LOCALISATION OF BULLETS.

THE localisation of bullets by electricity, one of the most interesting and important applications of electricity that has ever been made, involving as it does the saving of human life and the amelioration of human suffering, has recently been employed with complete success for the localisation of the bullet which so nearly deprived the Republic of the United States of America of its President. On the 16th of July last the following telegram, addressed to Mr. W. H. Preece, was transmitted across the Atlantic by Professor Graham Bell. 'Bell to Preece—Can Hughes suggest form of induction-balance to locate ball in President Garfield? In reply to this telegram, which was handed to Prof. D. E. Hughes, F.R.S., an answer was telegraphed back the same day, in which Professor Hughes gave instructions for the construction of an instrument, a special form of his induction-balance, which has been described in *Engineering;* and Professor Hughes also the same day sent by post to Professor Bell sketches, and a more detailed description of the way to proceed. Professor Hughes' instructions were immediately carried out in Washington, and telegrams which have reached this country inform us that the position of the ball within President Garfield's body has been localised with great accuracy by the electrical method devised by Professor Hughes. The method was as simple as it could be; an induction-balance was constructed, in which one pair of coils, were fixed at a definite and unvariable distance apart by being wound on a double bobbin or spool, being separated from one another by the thickness of the middle flange, and the four free ends of the two coils were made into a cable by which the two coils or searching apparatus were connected to the battery, telephone, and rheophone, and with a second pair of coils which formed the indicating apparatus. From the construction of the induction-balance it follows that by varying the distance of the adjustable coils of the indicating apparatus, until the induction currents in the apparatus are balanced or neutralised, silence in the telephone is produced as long as there is no outside disturbing metallic body within the range of induction of the searching instrument. The moment such is the case the compensation is destroyed, and the sound is brought back in the telephone, becoming louder or less audible as the disturbing body is nearer or further from the pair of searching coils. By passing such an apparatus over that region of the President's body in which the bullet is known to be, an ear placed at the telephone at the other end can immediately detect the sounds becoming louder when the foreign body is exercising its maximum inductive effect upon the balance; and as it is a fact that for equal distances the maximum disturbance is produced when the metallic body lies in the axis of the coils, it will be seen at once that not only the distance of the bullet from the surface of the body, but also its direction from any one spot, can be ascertained with extreme accuracy, and, by repeating the operation on different parts of the region under examination, a number of distances from the surface are obtained as well as a number of lines of direction, all of which have a common origin in the bullet. By this simple arrangement the surgeons attendant on the President of the United States have been able to localise the bullet within his body with unerring exactness.

VON LANGENBECK ON GUMMATA.

THE following is an abstract of a paper read by Professor von Langenbeck at the last Congress of the German Surgical Society, and published in the *Arch. für Klin. Chir.*, Band xxvi. Gummy tumours are so readily and surely amenable to a strictly medicinal treatment, that they might seem to be without the range of surgery. Their growth and maintenance are dependent on a specific infection; and they are to be considered rather as products of specific inflammation than as tumours in the strict sense of the word. These growths, however, demand careful study on the part of surgeons, as they are liable to be confounded with other tumours, and so may be wrongly thought to indicate some surgical interference, and probably some extensive and dangerous operation. This mistake is more likely to occur, since there is often a complete gap in the course of syphilis between the primary infection and the development of the so-called tertiary forms; and the syphilitic disease, after having been latent for many years in an apparently sound subject, may suddenly give rise to a gummy tumour. Another frequent cause of error is great difficulty in making out any previous history of syphilis, in consequence of ignorance or forgetfulness on the part of the patient. In cases of probable syphilitic lesions, the author has long been in the habit of paying but little attention, as a rule, to a patient's statement that syphilitic infection has never occurred. When several gummy growths do exist on the same subject, as is not unfrequently the case in gummatous affections of lymph-glands, tendons, and bones, and when distinct traces of previous syphilitic lesions can be made out, an error in diagnosis is not likely to be made. But, on the other hand, when in a relatively healthy subject there is but one swelling, and all other indications of specific infection are wanting, that surgeon is to be excused who may have resorted to the use of the knife, and have failed to make out the true nature of the growth until, unfortunately, it was too late. For the purpose of showing the importance of finding some means of recognising gummata with precision, a case is reported in which very serious results followed the excision of such a growth in the leg. Unfortunately, these swellings have no constant characteristic marks, and it is often very difficult to establish a certain diagnosis by both objective and subjective phenomena.

There are two typical forms of gummata. The swelling may exist either as a more or less diffused gummatous infiltration, or as a circumscribed and sharply defined gummatous tumour. In the diffused form it occurs most frequently near tendons, and especially about the tendo Achillis, and just above the olecranon and around the tendon of the triceps. In this condition, the gummy swelling resembles limited phlegmonous inflammation, with but slight tendency to extension and suppuration. Sooner or later the skin is perforated and an ulcer found with a light grey base, and secreting a thick viscid discharge, which ulcer, when it has healed, is replaced by a radiated and depressed cicatrix. The gummy

swelling, when circumscribed and in the form of a tumour, is intimately connected with the deeper structures, and does not move freely under the skin. This kind of growth is more or less painful, and often very tender. According to Dr. von Langenbeck's experience, this gummy tumour never remains indolent. As a rule, its growth is not regularly progressive. After having remained of the same size for a long period, it will suddenly increase and become inflamed without any evident cause. The original character of the growth is then lost, an apparent tumour having been converted into what seems to be an ill-defined mass of inflammatory infiltration. The size of a gummy swelling depends, not on the growth of a single deposit, but on the development and agglomeration of several small deposits, bound together by indurated connective tissue. This arrangement is best seen in specimens of cerebral gummy tumour, and of the so-called syphilitic sarcocele. The tumour thus formed is firm and elastic, and presents on section an opaque yellow and dry surface, marked by interlacing fibrous lines. The growths with which it is most liable to be confounded are carcinoma and fibroma. Specific medicinal treatment (iodide of potassium, mercurial inunction) causes speedy disappearance of a gummy tumour, and so, in doubtful cases, assists in the diagnosis. This medicinal treatment should not be continued for long if the swelling do not diminish in size and become less painful; since, in cases of cancer, especially of cancer of the tongue, it may cause degeneration of the growth and other bad consequences.

Gummy growths on muscles usually attain a considerably size, and are likely to be confounded with some form of proper tumour affecting muscular structures. They occur most frequently in large superficial muscle, and near the junction of the muscular and tendinous fibres. When affecting the tongue, they are very often brought under the surgeon's notice, and usually at an early stage, in consequence of the common dread of lingual cancer. There can be very little difficulty in the diagnosis of gummatous disease of the tongue, even in the absence of any history of syphilitic infection, provided the swelling be diffused and the oral mucous membrane also affected. The swelling is always confined, and never extends to the floor of the mouth. When the lingual gummy growth is small and deeply seated, and the mucous membrane of the tongue is sound, the diagnosis becomes one of great difficulty. In such cases, the author states, it is often impossible to make at once a positive diagnosis, and to decide whether the growth be a syphilitic or a cancerous deposit. A broken down gummy tumour in the tongue may be confounded with an abscess, but the true nature of the affection will usually be indicated by the discharge, which in the former condition consists in a thick viscid fluid presenting no microscopical characters of true pus. The chief difficulty in the diagnosis of syphiloma from carcinoma of the tongue is the fact of the frequent relation and association of these two affections. Lingual carcinoma, the author asserts, is much more frequent in males than in females, and in the majority of such cases a history of syphilitic infection can be made out. Cases are recorded to prove that long-continued and neglected gummatous disease of the tongue may pass into well-marked cancer.

Gummatous inflammation occasionally affects arteries, and its traces have been observed both in large trunks and branches, and in minute divisions. It may occur in the aorta, and probably has often led to the formation of aneurism. Von Langenbeck has been able to make out a syphilitic history in about half the cases of aortic aneurism that have come under his observation. The venous system, it is stated, is vary rarely affected by a similar syphilitic lesion. One case has been recorded by Dr. Greenhow, and Dr. von Langenbeck gives the details of a case in which a large gummy swelling of the neck involved the jugular vein. W. JOHNSON SMITH.

HÉRARD ON THE FAVOURABLE INFLUENCE OF HYDRO-PNEUMOTHORAX UPON THE PROGRESS OF PULMONARY TUBERCULISATION.

THIS paper (read at the meeting of the French Association for the Advancement of Science at Algiers by Dr. Hérard, Physician of the Hôtel-Dieu) was intended to show that, whereas ordinarily the occurrence of hydro-pneumothorax in the course of phthisis forms a serious and often fatal complication, in a certain number of cases, more frequently than is supposed, it exercises a favourable influence on the progress of the malady, may arrest its progress, and become an unhoped for means of safety to the patient. Dr. Hérard had collected a certain number of observations, which established in the clearest and most positive manner this salutary influence of hydro-pneumothorax. An illustrative case was that of a youth, a mechanic, aged 17, who was admitted into the Hôtel-Dieu on July 15th, 1880. His mother died of chest-disease, and his father from tuberculosis. He had been delicate from childhood, and had suppuration of the right ear since 3 or 4 years of age. Since a sudden chill in May he had had a constant cough, with expectoration, which became muco-purulent. Loss of strength and appetite, sweating, and profuse diarrhœa followed. These symptoms, together with great emaciation and hectic fever, were present on his admission.

Auscultation showed the existence of blowing respiration and subcrepitant *râles* at the right apex. Over the left apex there were cavernous breath-sound and gurgling, especially marked behind. There was dulness on percussion over the left apex, and some loss of resonance over the right. The vesicular murmur over the rest of both lungs was nearly normal. On August 10, on making a hasty movement, he was suddenly seized with an acute pain in the left side, and with intense dyspnœa; his face was pale and anxious. Tympanitic resonance was found all over the left side, except for about four or five finger-breadths at the base, where there was marked dulness. Amphoric voice and breath-sounds with metallic tinkling were heard on auscultation, the thoracic vibrations were abolished, and succussion could be easily felt, even by the patient himself.

For some days, the patient was alarmingly worse; the lower limbs became œdematous, and the evacuations were involuntary: he was thought to be on the point of death; but, after a struggle of several weeks, about the end of September, a favourable change took place, and from that moment he continued to mend daily The dyspnœa diminished, strength, appetite, and sleep returned. The cough diminished; and the expectoration, before so abundant, almost completely disappeared. The physical signs at that time were dulness, and resistance to the finger at the left base behind, exaggerated resonance in the other

parts of the chest; the amphoric breath-sound and the metallic tinkling had disappeared, but succussion was still perceptible; the cavernous blowing and the subcrepitant *râles* had notably diminished. The heart remained displaced to the right. At the end of November, he was able to return to his home in the country. Had he been able to pass the winter in a favourable climate, Dr. Hérard believes he might have been completely restored to health. Such cases as these are not rare or isolated ones; twenty such are collected in the thesis of Dr. Toussaint, from different authors.

How shall we explain the favourable influence of hydro-pneumothorax in these instances, and what is the mechanism by which a cure is effected? Is it possible to foresee in what cases such an issue may be hoped for, and in what cases a fatal event may be anticipated? Bearing in mind the anatomico-pathological conditions under which hydro-pneumothorax may occur, we may arrange the cases under three categories, founded on the state of the tuberculous lung.

In the first category, the lesions of the lung are in their earliest stage. The lung presents scattered granulations or small caseous nodules, in the midst of a tissue more or less hyperæmic, but in a condition in which any sudden compression might reduce it to a small volume. The occurrence of hydrothorax in such cases is not rare. All that is necessary in order to establish a communication between the bronchi and the serous cavity, is the softening of one of these small tuberculous masses on the surface of the lung. The first effect of such an accident is the compression and flattening of the lung by the escaped air and the liquid effusion which rapidly follows. Later on, false membranes envelope the organ in a sort of thick resistent shell, and maintain it reduced often to quite an insignificant volume against the vertebral column and groove. The lung, under these circumstances, is dense and carnified, and its functional activity is greatly diminished or completely suppressed; we can readily understand how, in such a case, the tuberculous evolution is checked, or sometimes altogether arrested.

In the second category, the pulmonary lesions are much more advanced, and the phthisis has reached the second or third stage only, and this is the important point; these changes are limited to the upper lobe, the other lobes presenting merely granulations or small caseous masses, surrounded by more or less congested lung-tissue. As in the first category, the effect of hydro-pneumothorax, by compressing the lung, is to arrest its functions, and in diminishing the afflux of blood, to prevent the nutrition of the morbid products, and to stop, in short, the tuberculous process. At the same time another remarkable phenomenon takes place in the upper lobe; the walls of the cavities, yielding to compression, come together, become agglutinated, and sometimes even cicatrise; the pulmonary suppurations and excessive bronchial secretion diminish, and, as in the case cited, the expectoration is completely suppressed. This suppurative process being arrested, the consequent hectic fever, sweating, diarrhœa, etc., disappear also, and the patient passes from the most alarming state into one of sensible amelioration, and even of real cure. But to ensure so favourable a result, it is necessary that the opposite lung should be and remain free from disease.

One of the cases cited by Dr. Toussaint gives anatomical demonstration of the cicatrisation of cavities under such conditions. A young soldier presented all the signs of pulmonary tuberculosis in the third stage, gurgling, loud cavernous blowing, metallic bruits at the left apex, and a few subcrepitant *râles* at the right apex; abundant purulent expectoration, great emaciation, profuse sweatings, hectic fever, intractable dyspepsia. A few days after admission into hospital, a sudden access of suffocation, with pain in the left side, drew attention to the occurrence of hydro-pneumothorax. For some days the patient seemed on the point of death, when slowly and unexpectedly he began to revive; the dyspnœa abated, the fever disappeared, and the appetite became good. The sweatings ceased, and the expectorations changed completely in character, and became scanty and glairy. This amelioration was maintained and augmented until some months afterwards, when an exudation into the right pleural cavity gradually increased, in spite of all that could be done, and the patient died. The necropsy shewed the existence of double pleural effusion. The left lung was flattened and compressed upwards and backwards, and strongly bound down, so that it did not reach below the fourth rib; at its apex there were traces of a large cavity, the walls of which were in contact and had become agglutinated and cicatrised; it was represented by a grey, irregular band, about the size of the little finger. Two smaller bands indicated the existence of two other smaller cavities. These were surrounded by masses of hard cretaceous tubercle. The right lung presented at its apex a few small masses of hard tubercle. These observations show the important part which the compressibility of the pulmonary tissue takes in the cure of such cases.

In the third category, we find the whole of the lung invaded by tuberculous lesions (granulations and broncho-pneumonia); the organ is hard, compact, resistant, irreducible by compression; in such cases, hydro-pneumothorax can only increase the peril which already exists.

It is incorrect, then, to regard the occurrence of hydro-pneumothorax in the course of phthsis as always fatal; on the contrary, in certain well characterised cases, it may be of favourable import.

I. Burney Yeo, M.D.

BIRD ON TREATMENT OF INTRA-THORACIC SUPPURATING HYDATID BY INCISION AND EXTRACTION OF THE CYST.

Dr. L. D. Bird of Victoria communicated two cases to the Medical Society of Victoria of intrathoracic hydatid cysts, which had advanced to the stage of death and decomposition, and were got rid of by incision between the ribs. Dr. Bird pointed out that this was a more complete and radical cure than tapping, or injections, or electricity, as we could never be quite sure, with the latter processes, that the vitality of the cyst had been completely destroyed, and its refilling, therefore, rendered impossible. But extraction was a far more serious and difficult operation, and only justifiable under certain conditions. The first of these was that the hydatid should be in the pleural sac, for then the cyst always enlarged with great rapidity, and, even when emptied of its contents, or dealt with in any way short of removal, remained a permanent source of irritation to the serous surface, giving rise to pleuritic pains, with fever and even inflammatory effusion. The question, of course, had to be faced of the possibility of

diagnosis between a pleural hydatid from one in the lower lobe of the lung, or on the convex surface of the liver, especially in the right side. Usually, in pleural hydatid, the rounded area of dulness is altered somewhat by change of position, which would not happen were the cyst embedded in lung substances.

Other conditions were the existence of large, old suppurating cysts of the lung, which had found their way into a bronchus, and led to the expectoration of fragments of cyst and fœtid pus, with much difficulty and distress to the patient. Such cases usually occurred in the lower lobe, adhesions were almost constantly found, and operation was comparatively safe and easy. He had seen more than a dozen such cases which had resulted in complete success. The following cases, one of pleural and the other of pulmonary hydatid, treated in this way, had not hitherto been published.

A married lady, aged 26, suffered from a condition variously diagnosed as pleuritic effusion, liver enlargement, and abscess. The right side measured an inch and a half more than the left; there was no history of acute pleuritis; pains, however, of a stitchy pleuritic character were felt all over the side. A rounded area of dulness, characteristic of hydatid, was found in the lower part of the right chest. Breath sounds and percussion note were normal at the apex, even when the hips were raised above the level of the thorax. A trocar was introduced in the seventh interspace, and three pints of semi-purulent fluid escaped, containing abundant hooklets on microscopic examination. This did not give much relief, and some ill-defined dulness was left about the base of the right lung, with pleuritic stitches, a quick pulse and high temperature, showing a local source of irritation in the pleura. Dr. Bird was now convinced that it was a case of pleural hydatid, and determined, in conjunction with Dr. Martin, to remove it. The tenth day after the first tapping, a free incision was made between the seventh and eighth ribs, and a large semi-decomposed hydatid cyst, broken into several fragments, was removed without difficulty. A few ounces of pus and broken down fragments of hydatid followed the main cyst, and then rather a free discharge of venous blood, which soon ceased. A piece of drainage-tube was left in the pleura. Great relief followed this operation, fever and pain disappeared, and there were no physical signs of any further foreign body in the cavity of the chest. But a fortnight after the patient began to complain again of dyspnœa and oppression, and, on exploring the cavity of the pleura with an elastic catheter, another cyst was burst into, which discharged about ten ounces of perfectly clear hydatid fluid, swarming with echinococci. This cyst, also, was removed, and the pleural cavity irrigated with weak solutions of iodine. Great relief followed, but, unhappily, symptoms indicative of hydatid in the pericardium ensued, viz., sudden and alarming attacks of dyspnœa, ending in syncope, with cardiac murmurs terribly jumbled and confused. These increased in intensity, till, in one of them, she died suddenly, the pleura and lung being apparently restored to their normal condition. There was, unfortunately, no *post mortem* examination.

The other case was one of hydatid of the lung substance. A girl, aged 9 years, suffered from excessive emaciation, with intense hectic and quick pulse, constant violent cough, and expectoration of pus and fragments of cysts of horrible fœtor. She could only breathe lying over partially prone on the affected side. A large trocar was introduced between the fifth and sixth ribs, and many ounces of fœtid pus and fragments of cyst escaped, and great relief followed. After two days the opening was enlarged, and the parent cyst was removed; a piece of drainage-tube was left in the nidus of the parasite, and this was often washed out with weak Condy's fluid. In less than a month the child returned to her home in perfect health, the wound having healed up from the bottom.

Dr. Bird, in answer to objections, said that even when diagnosis of site can be made with certainty, it must be remembered that simple tapping leaves the cyst intact, and, as this shifted from side to side with every movement, the cavity must refill or pleuritic irritation be set up. Suppuration was sure to take place, and then, with empyæma, plus a cyst, the old necessity for operation remained. As to iodine, it could not be injected into cysts of this kind in any strength. He had seen thirteen cases of old suppurating hydatids within the chest treated by incision, and only one died. In that case the cyst was the largest he had ever seen. At the first tapping, 156 ounces of fluid were withdrawn, and when the cyst was subsequently removed, it weighed a pound; yet the case was practically cured; but there was erysipelas in the hospital, and the very afternoon the patient was preparing to leave, a blush appeared around a small fistulous tract that remained, and septicæmia and death followed. At the *post mortem* examination, notwithstanding the enormous pressure which must have been exerted by so huge a cyst, the lung had again expanded.

I. Burney Yeo, M.D.

LUYS' NEW PROCESS FOR THE CONSERVATION AND MUMMIFICATION OF THE BRAIN IN A DRY STATE.*

The new studies of the nervous system give great interest to the laboratory work, whose object is to preserve anatomical specimens, whether it be to perfect them for demonstrations or to popularise them by descriptive or photographic means.

Until recently, the process of mummifying the brain consisted in the use of nitric acid more or less diluted, or in chloride of zinc, or in a solution of chloral. Broca extols the immersion of the brain, first in diluted nitric acid and then in glycerine; the object of the latter is to retard desiccation. But this process has the great inconvenience of shrivelling up the specimen, even to friability; so much so, that in one the brain presents only a dark hard mass of ligneous consistence and reduced to one-half of its former size. The new process has been in daily use in the laboratory of the Salpétrière, and the results are far superior to any hitherto known.

M. Variot, having noticed the favourable effect of the solution of bichromate of potass upon the cerebral substance, which swells out notably when immersed in that solution, and also of the hardening effect of carbolic acid upon the same substance, conceived the idea of employing these two agents, and submitting the brain-substance to their successive action, and lastly to the action of a glycerine bath.

The following is the proceeding. The brain being taken out of the cranium, the protuberances and the

* *L'Encephale;* and *Louisville Medical Journal.*

cerebellum are separated from it by a transverse incision. The brain lying still on its convex side, an incision is made with a thin narrow-bladed knife, running antero-posteriorly between the two mamillary tubercles. Both lobes are now taken out and accurately weighed, and plunged in a saturated solution of the bichromate of potass previously prepared. The vessel must be large enough to admit of complete submersion. Should the brain be wanted for histological studies, susceptible of being cut in small slices for microscopical examination, the bichromate of ammonia should be substituted for the bichromate of potass. The brain should remain immersed a fortnight or longer; it will then be much swollen, and the infiltration will be completed. It is then taken out of the bath of bichromate of potass, and plunged into simple water, in order to expel any excess of the bichromate. It is then placed in a bath of carbolic acid, 25 grammes to 1,000 grammes. This new process has the property of hardening the brain-substance, and reducing it almost to its normal size. A little acid must be added from time to time in order to keep up its hardening effect, which is apt to lessen. Six to ten days will suffice for its remaining in the acid bath.

As soon as the brain is taken out of the carbolic acid bath, it is plunged into a bath of pure glycerine for three or four days; the specimen may be wrapped in a cloth so as to prevent any part of the brain from emerging from the ambient liquid. It should not be left longer in the glycerine, for the brain absorbs a very large quantity of it, which might interfere with the hardening process. The brain is then taken out, placed on the flat side on soft linen, and exposed to the air. Should there be an excess of glycerine, plunge it for eight to ten minutes in a water bath. It is left now to itself, and will assume a green bronze colour, dry, and mummify almost insensibly. In two or three weeks the desiccative process will be completed. The specimens can be kept in open air or in boxes. After drying, a process for permanent preservation may be attempted. A thin layer of copal varnish and alcohol is applied with a fine camel's-hair brush. Care must be taken that the varnish reach the bottom of the most minute convolutions. As soon as the alcohol evaporates, the varnish combines with the nerve-substance, and forms an imputrescible combination, very hard, endowed with a degree of sonority when struck. Varnishing finished, the convolutions can be painted, each group of a different colour, by which they can be distinguished.

This process of preserving the brain by means of bichromate of potass, carbolic acid and glycerine, though seemingly complicated, is in reality very simple, if once the habit of using it be acquired. Such brains are now in the laboratory for two years and a half, completely imputrescible, and have lost only three-tenths of their original value. They are susceptible of being freely sliced for histological investigation.

Brains thus prepared are of vast importance for anatomical, pathological, and physiological studies, and especially in medico-legal proceedings. They are in the best possible condition for plaster-casts, and are of immense value to the student of anthropology.

ECHEVERRIA ON ALCOHOLIC EPILEPSY.

Continuing his analysis of the large number of cases of epilepsy which have been under his care in New York (see London Medical Record, April, 1881), Dr. Echeverria publishes an article on Alcoholic Epilepsy in the *Journal of Mental Science*, January 1881. A series of 572 cases is dealt with—307 males and 265 females. Of this number, 212 belonged to the middle and upper classes, and 306 to the lower; among these latter 108 were quite uneducated and 37 were outcasts, knowing nothing of their parentage. Though all cases in which alcoholism and epilepsy co-existed in definite relationship to one another are grouped together symptomatically, the author distinguishes etiologically three distinct divisions; these are thus composed:—

1st,—257 cases with alcoholism and epilepsy in plain sequential relationship.

2nd,—126 cases in which epilepsy resulted from alcoholic excess associated with the following agencies: syphilis in 67 cases; traumatic head-injuries in 42 cases; ague fever in 2 males; insolation in 9 cases; excessive chewing of tobacco in 1 male; mental anxiety in 5 males.

3rd,—189 cases, 92 males and 97 females, in whom drinking was a consequence of the epileptic neurosis, contributing to its aggravation, and to induce the same symptoms as in the two other divisions.

Dr. Echeverria was able to obtain particulars of the habits and nervous affections of the parents of 139 patients in the first division, and of 86 patients from the third division; these yielded the following results. The first series of 139 cases comprised 92 in which intemperance, either alone or associated with epilepsy, existed among the parents. In the remaining cases, the tendency to alcoholic excess, with resultant epilepsy, was inherited from insane or epileptic parents, themselves free from alcoholic complications, but who sprang, in 16 instances, from hard-drinking fathers, to which fact their nervous maladies were attributed; in no fewer than five of these families other individuals were congenital idiots. From the tables of the antecedents of these two series of cases (225 in all), and comparing them with the total number of cases of epilepsy under consideration, the following results are derived. 1. In 39.33 per cent., there was a hereditary taint received directly from the parents. 2. Parental intemperance solely originated the predisposition to epilepsy in 17.30 per cent. of the whole aggregate of cases. 3. Parental intemperance, associated with epilepsy or insanity, existed in 15.96 per cent. of the males, and in 19.24 per cent. of the females, making a total of 17.48 per cent. of the entire number of patients. Parental epilepsy was found in 12.70 per cent. of the males, and in 15.84 per cent. of the females. 4. Classing together the two preceding kinds of cases of intemperance in the parents, we obtain respectively a proportion of 20.10 per cent. in the males and 35.47 per cent. in the females. 5. Parental insanity or epilepsy, without any family history of intemperance, was met with in 4.54 per cent. of the whole epileptics.

The difference in the percentages between males and females is worthy of note. Parental intemperance, not ingrafted into epilepsy or insanity, and the existence of these in the parents without any family antecedent of drink, are both 2 per cent. lower in the females than in the males. On referring to the aggregate number of cases of intemperance in the parents, irrespectively put together, there is an in-

crease of 15 per cent. on the females over the males. A preponderance of 3.28 per cent. results again on the female side, when intemperance associated with epilepsy or with insanity appears as hereditary cause; and this difference in favour of the females is almost the same in relation to patients sprung from parents tainted with epilepsy. Henry Clarke has shown that this preponderance of hereditary epilepsy among females rises to a considerably greater degree as a predisposing cause of epilepsy and crime, the rates being 66.7 among females, against 38.1 among males (London Medical Record, 1880, p. 207). Dr. Echeverria's figures do not bear out Clarke's assertion that hereditary alcoholism is considerably less common in women than in men, nor that epilepsy in men is associated especially with alcoholism in the parents, whereas in women it is found more frequently with mental and nervous disease in the family. It is important to remember that Echeverria is dealing with much larger figures than were at Clarke's disposal. In some instances the present author traces the hereditary connection through three generations.

In the matter of the percentage of congenital idiocy caused by intemperance in the parents, the author's observations practically confirm the approximate accuracy of the figures previously arrived at by Langdon Down, Fletcher Beach, and L. N. Kerlin. The percentage of cases of epilepsy arising from intemperance (not accompanied by mental or nervous disease) in the parents may be fairly estimated at 18.

Of the 139 epileptics from the first division, with hereditary taint, no less than 64 per cent. of the males and 82.2 per cent. of the females had suffered from convulsions in childhood; although they did not become epileptic until after the age of 18, and then in consequence of intemperance.

In most of the 86 patients belonging to the third division, who were found to have hereditary taint, epilepsy was developed in childhood, or before the age of 15. It is remarkable that every one of these patients suffered from convulsions in infancy, while, in addition, 14 had left hemiplegia; 3 right hemiplegia and idiocy; 4 wasting palsy of one arm; 5 paralysis of one leg; 4 deformity of the spine from Pott's disease; 4 facial paralysis; 5 strabismus; and 5 deafness and otorrhœa. All these affections dated from infancy.

Before quitting the subject of hereditary influence, the author points out that, notwithstanding the manifest influence that the tendency to drinking has had in inducing epilepsy, both conditions are actually allied manifestations, originating from a single inherited neurotic predisposition, and successively reacting on each other. The opinion is expressed that neurotic heredity contributes to a larger extent than vice itself and misery to the prevalence of drinking. By heredity is here meant, not merely the direct transmission of intemperate habits to descendants, but also the tendency to drinking as one of the metamorphoses that often accompanies the inheritance of mental and nervous diseases, without necessary existence of alcoholism in the parental stock.

In 26 patients (9 males, 17 females) who were descended from parents affected with epilepsy or insanity, but of strictly sober habits, and with no evidence of intemperance in any of their ancestors or blood-relations, it was noted that the tendency to drinking was suddenly developed (without any other evidence of insanity), prior to the explosion of epilepsy and at the age of puberty, excepting in two females, not married, in whom the passion for drink, soon followed by fits, appeared at the climacteric period.

Referring next to those 67 cases (belonging to the second of the author's etiological divisions) which were complicated with syphilis, it is stated that in 49 of them, the fits were followed by partial paralysis; in many of them the paroxysms had a tendency to recur in a cumulative manner, with deep stupor and symptoms of cerebral congestion; or in a series of abortive fits, preceded by a severe one. Not uncommonly a single attack initiated a depressed sullen condition, with uncontrollable impulse to automatic dangerous acts, prompted by hallucinations of sight or hearing of a terrifying character. The distressing nature of these sensorial phenomena appears more conspicuously in these mixed cases than in those of simple syphilitic epilepsy (see London Medical Record, 1881, p. 134). Paralytic dementia was developed in 8 males and 1 female. Paralysis ordinarily betrays a complicated etiology of alcoholic epilepsy, which may, in simple cases, be followed by paresis in greater or less degree, but without complete inability to move the limbs.

Paralysis was less frequent when, instead of syphilis, traumatic head-injuries had joined with alcoholism in the production of epilepsy. In 9 out of 11 cases of this kind, the onset of the epilepsy coincided with the occurrence of the cranial injury. We are told that the most remarkable feature in these traumatic patients was that their paroxysms, chiefly vertiginous or nocturnal, were attended with impulsive explosions of the most dangerous character.

Coming now to the third of the author's great divisions; 86 cases, in which heredity was apparent, have already been analysed. There remain 103; in these the epilepsy was ascribed to various causes, among which head injuries and the climacteric change stand foremost. The various neurotic derangements, including irresistible craving for alcoholics, brought about by the climacteric change, are well-known. Echeverria pointed out in 1878 that intemperate instincts are often developed as premonitory symptoms of the convulsive seizures in cases of traumatic injuries to the head. In 27 out of 63 cases of this nature, intemperance, entirely unnatural to the patient, was fairly clear as one of the moral changes which foreboded the spasmodic fits.

Notwithstanding the author's division of his cases into etiological groups, he maintains that all cases of alcoholic epilepsy are clinically alike. They all present the same peculiar delusions and psychical symptoms, the same sudden instinctive explosions as incidents, the same rise of temperature, soft, rapid, dicrotous pulse, and dyspeptic derangement, along with their frequent attacks; and they all require the same management. He urges that in the majority of cases a deep cerebral disturbance, derived either from hereditary influences, or from accidental encephalic lesions of various sorts, is to be found at the root of the disease. The essential manifestations do not vary, whatever may be the manner in which alcoholism becomes the original factor of that form of convulsive neurosis called alcoholic epilepsy. Lasègue has said that every patient who, after an epileptic attack provoked by drink continues epileptic, has been epileptic previously. Echeverria prefers to state that such person has either been previously an epileptic, or belongs to the class of '*cérébraux*', individuals with a vicious or defective organisation of brain, originally related either to congenital influences or to accidental lesions.

The special etiology of alcoholic epilepsy does not give rise to any characteristic signs in its convulsive paroxysms, but the vertiginous and maniacal seizures display a wilder, more stupid, and more dangerous form than usual. Changes in the optic disc are chiefly observed when the disease is complicated with syphilis or traumatism. In some cases optic neuritis, with complete blindness, has not prevented the occurrence of vivid hallucinations of sight. Suicidal tendencies are more frequent in alcoholic than in simple epilepsy; they are often associated with homicidal impulses, and were observed in 31 males and 22 females among the author's cases.

The worst forms of epilepsy were noticed among those who had drunk whisky only, and this spirit had been used more commonly than any other by the patients. No case of absinthic epilepsy was seen by the author. When drinking was related to heredity, the vertiginous attacks prevailed among the manifestations of the epileptic malady: these were very abject and dangerous patients; one of their characteristic features was perversion of sexual instincts and excessive lewdness. These observations agree with those of Taquet (LONDON MEDICAL RECORD, 1878, p. 8) and Henry Clarke (*l. c.*, 1880, p. 207).

The negative results met with in the treatment of alcoholic epilepsy might be anticipated from the facts that epilepsy is, in itself, usually incurable, and that alcoholism, if not incurable, is always prone to relapse, the moral nature remaining unchanged. Abstinence and the ordinary treatment serve to arrest the fits in most cases where syphilis, traumatic head-injury, or other special complication does not require the use of specific means. Trephining was practised in one case of traumatic injury to the skull, but although the fits ceased after the operation, a return to intemperate habits brought about a fatal relapse.

The largest proportion of dangerous lunatics, and the most difficult to deal with, belong to the class of the alcoholic insane, mainly composed of instinctive lunatics and epileptics. Benevolence may regard it as an unjust punishment to keep them in custody after they recover from their paroxysms; but, owing to the inevitable tendency of these latter to recur, the safety of society requires that such patients should be detained under treatment. Cases of permanent recovery are cited; but their number is exceedingly small, and it would be impossible to quote them as representing the real issue of any plan of treatment.

The cerebral lesions found *post mortem* in this disease are identical with those of chronic alcoholism; the author gives an account of them, which is, however, merely a recapitulation of previous observations. C. S. W. COBBOLD, M.D.

SAYRE ON THE ADMINISTRATION OF CHLOROFORM.

IN the proceedings of the Louisiana State Medical Society, at its meeting, March 31st, Dr. Sayre, in a paper on hip-disease, made some remarks on the administration of chloroform. He said his plan was entirely at variance with that taught in the books, and with the doctrine of most authorities, namely, 'that air must be inhaled with the anæsthetic'. 'Air,' said Dr. Sayre, 'is the antidote to the anæsthetic, and as long as it (the air) is introduced, anæsthesia will be prevented. He, therefore, carefully excluded all the air not saturated with chloroform, and found that five, ten, fifteen, or twenty drops thus administered, according to the age of the patient, produced prompt anæsthesia, and without that muscular resistance and the contortions of the body which commonly followed its administration when mixed with air.'

The reporter then proceeds to comment severely upon Dr. Sayre's plan. It is not difficult to prove that air saturated with chloroform vapour rapidly destroys animal life. It is equally easy to show that breathing the same air over and over again will cause fatal asphyxia if persevered with. But Dr. Sayre does not really mean to administer air saturated with chloroform. Air at 70 deg. takes up 24 per cent. of chloroform-vapour. And this would be so pungent as to be scarcely respirable, or, if administered through a trachea-tube, would kill a dog in a very few minutes. Dr. Sayre also knows the danger of going on too long breathing an atmosphere without admitting fresh air; and therefore, as soon as the patient is tranquilly asleep, he would doubtless allow some fresh air to be breathed. Dr. Sayre has merely given his sanction to the plan of giving chloroform in the manner urged by Dr. Morgan of Dublin with reference to ether. The plan is to pass the expired air through a chamber containing the anæsthetic and thence into an elastic bag, from which the same air, *plus* the anæsthetic vapour, is inspired again by our gas and ether inhaler. Ormsby's ether-inhaler and our portable regulating inhaler are arranged on this plan. Chloroform and ethidene dichloride have been administered in the same way with undoubted advantage, so far as getting the patient to sleep without struggling.

But we need not allude to the more complicated inhalers to justify the limitation of fresh air. Even in the common methods of giving chloroform, although the usual directions are to avoid giving the anæsthetic vapour insufficiently diluted, the manner in which this is applied effects the breathing over and over again the same atmosphere. The handkerchief or towel held near the face is a sufficient barrier against diffusion of the expired air with the surrounding atmosphere.

Before we had thought of a plan for measuring the percentage of chloroform vapour in the air, we used to pour about a dessertspoonful of chloroform upon a piece of lint tied up in the shape of a cylinder, and hold this above the nostrils; we then placed a towel completely over the patient's face and head, and by this plan a great part of the expired air was breathed over and over again. If care be taken not to leave the lint near the nostrils during a pause in breathing, it seldom excites coughing or struggling, and answers exceedingly well; but it does not put to sleep so quickly as when all fresh air is excluded by the use of an India-rubber bag.

For three or four years we have been putting patients to sleep by causing them to breathe in and out of a bag into which we introduce a current of air charged with chloroform, and we do not give fresh air until consciousness is abolished.

The asphyxia arising from obstruction of the air-passages is dangerous in several ways, but that kind which arises, and would ultimately be fatal, from breathing an atmosphere deficient in oxygen, is removed completely with marvellous rapidity on admitting fresh air before the respiratory movements have stopped.

It appears to us that it is much easier to give

chloroform to those who breathe freely without any pause. During a pause in breathing the atmosphere near the nostrils is altered, becoming more highly charged with chloroform. Now, when the access of fresh air is stopped, the patient soon feels the want of air and breathes freely. By thus breathing, the requisite amount of chloroform is got into the blood without the necessity for making the atmosphere at all pungent. We find that, when there is neither coughing nor the movement of swallowing excited by the anæsthetic there is less than usual sickness produced. Making allowance for the general character of Dr. Sayre's remarks, we agree with him in thinking that chloroform-narcosis should be induced without allowing the patient to inhale fresh air, but that some should be introduced as soon as the loss of consciousness is perceived.

J. T. Clover.

FRERICHS ON THE SIMULTANEOUS EXISTENCE OF ALBUMEN AND SUGAR IN THE URINE.

In a paper read before the Berlin Medical Society, and published in the *Deutsche Med. Woch.*, No. 24, 1881, Professor Frerichs says that the co-existence of albumen and sugar in the urine occurs under various conditions, which must be carefully discriminated. Three forms of this anomalous process of secretion must be distinguished: one occurring in glycosuria, another in diabetes mellitus, and a third in chyluria. In glycosuria—by which Frerichs denotes cases in which small quantities of sugar are discharged within a longer or shorter time without having any obvious influence on nutrition—albuminuria is frequently met with. Of thirty cases observed and collated by Frerichs, albumen was found in fourteen, that is, in nearly one-half. They were partly acute, partly chronic, diseases of the brain. Three times albumen and sugar were observed in the urine of patients affected with cerebral aneurism, which had burst into the ventricles; four times in extensive apoplexies; twice in purulent cerebral meningitis; and once in chronic tuberculous basilar meningitis. In all these cases the ventricle was found to contain blood, with the exception of one case, in which the apoplectic focus extended to part of the cerebellum and to the cerebral peduncle. The chronic form of the disease lasted for years, and there was no opportunity of making a *post mortem* examination. In these cases Frerichs three times observed albuminuria, and also, in the further progress of the disease, simultaneous paresis of the facial nerve. The sugar in these cases amounted to from 1½ to 2 per cent., while the quantity of albumen varied. Sometimes the sugar disappeared, and then the albumen, until in some cases there was a retrogression of the renal secretion. At the same time polyuria existed; in other cases it was absent.

In all these cases of glycosuria, Frerichs thinks the secretion of albumen and sugar to have the same source, namely, a lesion of the fourth ventricle, since, when the injury is situated higher, there is secretion, not only of sugar, but of albumen also. In such cases, the prognosis must depend upon the nature of the cerebral lesion. Severe apoplexy, with lesion of the lateral ventricle, usually proves fatal in a few days; so also does cerebral aneurism. The course is more favourable in meningitis, in which recovery occurs in some circumstances. Frerichs reports two cases, in which the secretion of albumen and sugar ceased, and all symptoms disappeared.

In the chronic form, the prognosis must be cautiously made, for this mostly affects persons whose health is impaired by mental excitement or overwork, who complain of headache and indisposition, and are unable to attend to their daily avocations. Apoplectic injuries are associated with remarkable frequency with glycosuria, a circumstance that points to an effusion of blood into the fourth ventricle.

In the same manner may be explained the co-existence of albumen and sugar in cases of poisoning, especially by carbonic oxide gas. In 12 out of 17 cases there was sugar; in three there was albumen and sugar; and in one only albumen, together with cylinders.

In diabetes mellitus, the condition is altogether different. It is assumed by many that diabetes mellitus will lead to nephritis. Griesinger, in 64 *post mortem* examinations of cases of diabetes, found 32, that is, one-half, complicated with nephritis. Seegen found nephritis in 20 of 30 cases in the Vienna *post mortem* house; while Dickinson found 25 of 27 cases in the St. George's Hospital to have nephritis. With that, however, Frerichs's experience does not agree. In true diabetes, albuminuria is not frequent, nephritis rare, and occurs only in certain conditions. Out of 316 cases of diabetes mellitus, which Frerichs partly observed for ten, twelve, and even fifteen and sixteen years, there were only 16 cases of nephritis (5 per cent). Cases in which small quantities of albumen were occasionally found in the urine were never pure and simple cases, since it could be proved, at least in most of them, that other processes were involved, which of themselves could produce nephritis. Of 16 cases, 6 were complicated with arterial sclerosis; in 3 others there was pulmonary phthisis; in 2 cystitis; and in 2 arthritis with renal calculi. Therefore, only three cases remain in which no co-operating cause could be suggested. Thus it becomes evident that the general belief that the increased action of the kidneys in diabetes mellitus leads by fluxion to albuminuria and nephritis is erroneous, notwithstanding that it has numerous followers. According to Frerichs' *post mortem* examinations, which comprise more than 50 cases, true nephritis is hardly ever met with in diabetes; and where it did occur, it was of a parenchymatous nature, moderate hyperæmia of the renal substance, or there was shrivelling of the kidney. It has been believed that the changes of the epithelium of the gland, now and then occurring in diabetes, and lately described by Ebstein, might contribute towards the production of albuminuria. These changes in the epithelium have been searched for in the clinic, and have been found where there was no albumen in the urine; so that Frerichs feels rather disinclined to go as far as Ebstein does in drawing conclusions. All cases which were complicated by pulmonary phthisis proved fatal, while in all cases in which albuminuria was produced by additional cystitis, nephritis, or arthritis, there was a favourable course. An old gentleman, aged 79, who was attacked with pneumonia while in Carlsbad, and was afterwards lying ill in Nice, suffered from albuminuria, on which cystitis supervened. Gradually the sugar disappeared, and albuminuria, with cylinders, set in. Then the albumen disappeared, and at present he may be regarded as cured.

There is yet another condition in which sugar albumen and fat occur together—chyluria. It remains, however, an open question how the sugar is transmitted

into the urine along with the albuminates. Whether, as some believe, there is a damming back into the lymphatic vessels or a transition into the urine, consecutive upon chylosis, has not yet been determined by anatomical observation. One thing only has been established by Brieger—that fat disappears from the urine if it be withdrawn from the patient's food, and that it reappears in the urine as soon as it again becomes part of the food. It is much to be regretted that the experiment was not made with regard to sugar.

LEUBE ON THE PRESENCE OF BACTERIA IN THE URINE.*

Of all cases in which micro-organisms are found in the human body, by far the most interesting are those in which they appear during life, and it is to such cases that the present article refers. The localities in the living body where bacteria appear are, naturally, those which permit a more or less free communication with the external atmosphere, such as the mouth, nose, and intestine. In particular instances, the intestinal bacteria cease to be harmless inhabitants of the bowel, and excite diseases which stand in direct causal relation to them. Dr. Leube has no doubt that many instances of diarrhœa, particularly those which follow previous obstruction, owe their origin to a great development of bacteria and putrefaction, and to the consequent acceleration of the peristaltic movements. This is particularly noticeable when the diarrhœal dejections are of an extremely fœtid character, and when they are forcibly expelled by gaseous accumulations behind the fæcal masses. Leube finds in such cases that there are enormous masses of bacteria in the fæces, and that these show much more branching and chain formation than is found in the normal state. He recommends as treatment enemata of salicylic acid.

In connection with this subject a very important question arises, viz., whether, in tissues and secretions which are removed from direct sources of bacterial infection, bacteria or micrococci are to be found during life. Very different answers have been given by different observers. Leube had an opportunity of satisfying himself of the extreme accuracy of the method of experimentation of Giacosa and Nencki, who plunged in boiled mercury portions of tissues, removed from the living animal, under the spray, and found them free from bacteria; but, in Leube's opinion, these observations only show that the living organs may be free from micro-organisms, not that they are so under all circumstances.

As much doubt hangs round the condition of the urine as regards bacteria as does round that of the tissues. Many observers have shown that fresh urine can, under appropriate conditions, be preserved for long periods without the formation of bacteria. Many recently discovered facts point to the possibility that in the normal, as well as in the diseased condition, organisms may pass the glomerular membrane from within outwards. In consideration of the extreme importance of the question, Leube undertook to investigate the subject of the presence of bacteria in freshly passed urine, and the results of this inquiry are given in the article before us, as well as the details of a method of investigation, which, he thinks, may be of clinical value. He proceeded as follows. In a porcelain vessel, filled with mercury, he placed a small glass cup, having an upward prolongation, about the size of an ordinary test-tube. Having filled the latter with the mercury, the whole apparatus was heated to at least 150 deg. Cent. (302 Fahr.), and then allowed to cool. The penis of the person on whom the observation was to be made was carefully cleaned and washed, and then pushed into the mercury under the glass vessel. The patient was then told to micturate, which, in the majority of instances, was readily enough performed. The urine which passed became collected in the upper part of the glass vessel, displacing the quicksilver. The apparatus was then placed in the sun, or in a cultivating chamber. For months the urine so collected remained pure, clear, and free from bacteria; and, hence, Leube concludes that the normal human urine contains neither bacteria nor their germs.

Regarding the state of the urine in disease he has made no observations, but he recommends this method, particularly for the investigation of pathological urines for germs.

J. Graham Brown, M.D.

* *Zeitschrift für Klin. Med.*, vol. iii, p. 233.

HUTINEL ON CIRRHOSIS WITH STEATOSIS OF THE LIVER.

M. Hutinel, in a communication to the Clinical Society of Paris, on March 10 (*Jour. des Conn. Méd.*, May 1881), discusses the cases with which he has several times met, of sclerotic lesions of the liver in tuberculous patients. These cases were remarkable from the clinical manifestations which revealed their existence, as well as from the details of the histological examination. The subjects attacked were usually old drunkards, who had become tuberculous; and the liver was altered by the double influence of alcoholism and of tuberculosis, so that if, on the one hand, tuberculosis had impressed its mark on the hepatic lesion, the latter had also an incontestable influence on the evolution of phthisis.

The history of the patients was almost always alike for a shorter or longer time; insufficient food, with excess of wine, brandy, and absinthe; disordered digestion, gradual diminution of strength, and cough. The cough, at first occasional and dry, became persistent and disquieting; presently hæmoptysis or epistaxis appeared; then fever, loss of appetite, vomiting, and pain in the abdomen; and finally the patients were admitted into the hospital. There the patients were remarkable for their aspect of depression, with dry lips, red sticky tongue, pale countenance, hot skin, almost resembling typhoid patients. The febrile reaction was marked, but the thermic curve was very irregular. The colour of the skin was yellowish and earthy rather than subicteric; the conjunctivæ, however, were distinctly yellow. The liver was large, sometimes even enormous, painful, and sensitive to pressure. The abdomen was painful, especially at the right hypochondrium, the liver was voluminous, and there was slight ascites or meteorism. The urine was brown and deeply tinted, deficient in urea, turning green or red with nitric acid.

The patients coughed and expectorated; in their lungs *râles* were audible, large or small, subcrepitant, dry or moist, sometimes with sibilus; sometimes, but for the slight dulness of the summit, and the more or less marked predominance of rhonchus in the superior lobes, the existence of tuberculosis might have been overlooked, and a simple catarrh believed

in. Multiple, but scanty hæmorrhages frequently supervened, and each day a few drops of blood were lost through the nose, mouth, and lungs, sometimes even by the stomach, or petechial spots appeared on the limbs or trunk.

In general, the disease progressed quickly, and its subjects succumbed with comatose symptoms. At the necropsy, thousands of recent granulations were found, together with older caseous nuclei. The peritoneum was not inflamed, although it might often have been supposed to be so during life; it contained fluid in varying proportion, but this serosity was not very thick, and even very careful examination would but rarely show taberculous granulations disseminated over the serous membrane. The liver attracted attention by its volume and aspect. It was large, thick, and heavy, usually smooth and yellow, like a fatty liver, whilst at the same time it was hard and resistent, like a cirrhotic liver. On examination with the microscope, the enormous quantity of connective tissue was remarkable on the one hand, showing red when cut into sections and coloured with picrocarmine. On the other hand, the fatty transformation of all the cellular elements of the parenchyma was notable. This did not resemble either the atrophic cirrhosis of alcoholic patients nor the hypertrophic cirrhosis with icterus.

From the anatomical point of view, necropsy reveals two orders of lesions: tuberculous lesions, and cirrhosis with steatosis of the liver. Tuberculosis, according to the history given by the patients, always preceded, by some months at least in these cases, the appearance of liver-affections. From the clinical point of view may be seen the evolution on the one hand, of tuberculosis making rapid progress, and of the liver-change, the character of which resembles those of marked but grave subacute icterus: and these lesions have a material influence on each other.

CYR, KUSSMAUL, PETTERS, AND FOSTER ON DIABETIC COMA.*

PROUT has written that a diabetic individual may be considered as existing on the brink of a precipice; and since Prout's time the very precarious tenure by which diabetics hold their lives has come to be very generally recognised; and we are all aware of the great risks to which such patients expose themselves in travelling, probably on account of the unavoidable annoyances, as well as fatigue, which travellers, even in these days, must put up with. Violent mental emotion and bodily exertion are, therofore, two well-known dangers which we cannot be too careful to warn our diabetic patients to avoid.

It is understood well, too, that diabetics are more liable than other persons to the same sort of accidents that befal all persons occasionally: thus a diabetic is more likely to have an attack of pleurisy or pneumonia, and such inflammations not unfrequently pass on to breaking down of the lung, or even to gangrene of the inflamed portion. But besides this special predisposition to inflammatory diseases, there is a mode of termination of diabetes which has something characteristic and peculiar in it, and which has of late years received a good deal of attention from some of the best clinical observers. It differs from those already alluded to, in the alarming nature of the symptoms and the rapidity with which death may supervene in the midst of apparent good health. This it is to which the name of Diabetic Coma has been given, from coma being the final and most constant phenomenon, although it is usually preceded by excitement and dyspnœa, more rarely by nausea and vomiting.

The excitement has been described as analogous to that seen in the first stage of chloroform narcosis: the patient is a little incoherent, more vivacious than natural, and speaks rapidly. At the same time he complains of malaise, and occasionally headache is present.

This period of excitement is followed by dyspnœa, which comes on generally suddenly and with violence. The inspirations are deep; both inspiration and expiration are prolonged; the air passes well into the lungs, but, apparently, does not oxygenate the blood. The stage of dyspnœa is not always preceded by excitement, but may come on all at once and without warning.

The attacks of dyspnœa may recur several times; but finally the patient becomes less conscious of what is going on around him, and gradually sinks into coma, which becomes more and more profound until terminated by death. In some cases the coma is not preceded by the other symptoms, but may supervene suddenly, even during a period of apparent health. No convulsive movements have ever been noticed, which affords this form of coma at present a distinctive negative character. The length of time occupied by the stages above mentioned, until death supervened, has varied in the cases hitherto reported from ten to fifteen hours to three days or more, but the average has been about thirty-six hours.

The sudden termination of diabetes is undoubtedly more common in the young than in persons of more advanced age, but the most potent cause in determining this accident seems to be some excitement, either physical or mental, especially travelling, unusual bodily exertion, and the like. When we proceed to inquire more closely into what is known as to the causation of this group of symptoms, we find great differences of opinion and many conflicting statements of fact, but we shall endeavour to arrange the information which is at our disposal and to draw from it such conclusions as the state of our knowledge may permit.

Dr. Jules Cyr of Vichy ('De la Mort Subite ou très rapide dans le Diabète.'—*Archives Générales de Médecine*, 1877, vol. ii, page 641; and 1878, vol. i, page 37) has collected from the writings of various authors, and from his own practice, thirty-two cases of sudden death occurring in diabetes. From an analysis of these cases, he concludes that there are five modes in which the fatal termination may be brought about. These are: 1. Acetonæmia; 2. Hyperglycæmia, in which the excess of sugar changes the composition of the blood-serum so that the vitality of the red corpuscles is destroyed; 3. The retention of the extractive principles or the watery part of the urine, either, or both together, leading to dropsy of the ventricles and œdema of the brain; 4. Atrophy of the heart; 5. Cerebral anæmia.

Of these five assigned causes, we may dismiss numbers three and five as too vague and indefinite for profitable discussion, and we will proceed to investigate the nature of the facts, if any there be, upon which have been based the conclusions that acetonæmia, hyperglycæmia, and atrophy of the heart occur in diabetes, and how they are supposed

* From the *Birmingham Medical Review*, July 1881.

to bring about the group of symptoms, the cause of which is the present object of our inquiry.

The theory that the symptoms of diabetic coma might be due to the presence of acetone in the blood was first propounded by Kussmaul, in 1874, who was moreover the first to describe this mode of termination of diabetes (*Deutsches Archiv für Klin. Med.*, Aug. 1874).

Petters (*Prager Vierteljahrschr.*, 1837, p. 81) had already discovered acetone in the blood and urine of a diabetic patient, and had ascribed his death to acetone poisoning, and Kaulich (*Ibid.*, p. 58) had confirmed his observations.

Kussmaul experimented on the results of artificial acetonæmia by injecting acetone under the skin or into the rectum of dogs and rabbits, and observed that it produced intoxication, stupor, and slow respiration, but the quantity required to effect this was relatively very large. To overcome this difficulty, Kussmaul suggested that the long-continued introduction of acetone into the blood might induce a chronic poisoning, which, in weak conditions of the nervous system, might some time assume an acute form, just as chronic alcoholism in drunkards suddenly breaks out into delirium.

Three years later, in 1877, Dr. Balthazar Foster read a paper on acetonæmia as a cause of diabetic coma, at the annual meeting of the British Medical Association at Manchester (*Brit. Med. Jour.*, Jan. 19, 1878). He described the case of a boy who was attacked by severe dyspnœa the day after admission to hospital, and died next day. His blood presented a pale cream-like character, which, under the microscope, presented the appearance of a molecular material like fat-globules, but did not dissolve in ether. Having subsequently become aware of the suggestions as to the action of acetone as a cause of diabetic coma, he, in conjunction with Dr. Saundby, made some experiments on the effect of acetone on the blood, and having found that it makes blood milky, and that, under the microscope, blood so treated presents the same molecular character from breaking up of the blood-corpuscles, he suggested the hypothesis that the state of the blood in this case was due to the development of a large quantity of acetone in the vessels, and to its action on the blood corpuscles. He furthermore maintained it to be probable, that the dyspnœa in these cases was due to the destruction of the blood-corpuscles by the action of the acetone.

But doubts have been thrown on the statements of Petters and Kaulich that free acetone exists in the blood, and Rupstein has denied it, affirming that it is produced by the splitting up of ethyl-diacetic acid thus:—

$$\underbrace{C_6H_9NaO_3}_{\text{Sodium ethyl-diacetate.}} + \underbrace{2H_2O}_{\text{Water.}} = \underbrace{C_3H_6O}_{\text{Acetone.}} + \underbrace{C_2H_6O}_{\text{Alcohol.}} + \underbrace{NaHCO_3}_{\text{Sodium hydriccarbonate.}}$$

In the early part of 1880, Dr. Kiehn of Strasbourg published a case of diabetes terminating fatally, with dyspnœa and coma accompanied by elimination of acetone (*Gaz. Méd. de Strasbourg*, 1880, No. 2). In the discussion on this case at the Société de Médecine at Strasbourg, most of the speakers declined to accept the view that death resulted from acetone poisoning, as they maintained that acetone was often eliminated by diabetics without apparent interference with health.

About the same time, Professor Quincke of Kiel published an account of a case of diabetes in a young lady aged 16, who died comatose with dyspnœa (*Berl. Klin. Woch.*, Jan 5th, 1880). During life, the urine gave a strong reaction with ferric chloride. The *post mortem* examination disclosed no localised lesion, except lobular pneumonia and œdema of both lungs. In his paper he discussed the nature of the substance in the urine which gave rise to the red colour with ferric chloride, and pointed out that it resembles acetic ether in this coloration, in the disappearance of the reaction by strongly acidulating or boiling the urine, and by the appearance later on of its decomposition products, alcohol and acetone in the urine. But, on the other hand, the urine containing this substance did not smell of acetic ether, although ordinary urine or water containing an equal quantity, as estimated by the colour test, smelt strongly; so that, if acetic ether were present, it must have been combined with something, and it was proved that this was not an alkali, or grape-sugar, or any normal constituent of the urine. No one except Rupstein has ever been able to extract acetic ether from urine by shaking it with ether.

Quincke performed twenty experiments on animals, in order to determine the physiological effects of acetic ether. The animals died with marked dyspnœa; in only one instance did the urine give any reaction with ferric chloride, and the breath never smelt of acetic ether; glycosuria was sometimes present. Apparently, therefore, the acetic ether was rapidly destroyed in the body. Quincke concludes by stating his belief that the substance in the urine of diabetics which gives the red coloration with ferric chloride is not acetic ether, but a nearly allied body, and that there is ground for believing that the dyspnœa of diabetics is not always identical in its character or always produced by one and the same substance, but, like uræmia, it is probably produced by the combined toxic action of many substances formed by abnormal metamorphosis.

But a fresh contribution to this question was the importance newly assigned to the old fact, that the blood of diabetics often contains large quantities of fat.

The presence of an unusual amount of fat in the blood in certain cases of diabetes was pointed out many years ago by Dobson and Rollo, and has been confirmed by a great number of observers, among whom are Marsh, Hutchinson, Thomson, Lebert, Pavy, Hoppe-Seyler, etc. They have shown that an appreciable amount of fat can be extracted from the blood of diabetics by agitating it with ether. Simon found 2 to 2.4 per cent., while the normal is only 1.6 to 1.9 per cent.

In 1879, the late Professor Sanders of Edinburgh, and Mr. D. J. Hamilton, published a case of diabetes in which the patient died with dyspnœa and coma, and at the *post mortem* examination the blood was milky, and contained a large quantity of fat-globules, and fat-embola were found in the pulmonary capillaries. They suggested that capillary embolisms of the brain and lungs might be the cause of the dyspnœa and coma (*Edinburgh Med. Jour.*, July 1879).

Dr. Arthur Gamgee (*Text-Book of Physiol. Chem. of the Animal Body*, vol. i) has published the notes of a case which was in the Manchester Royal Infirmary, under the care of Dr. W. Roberts. This patient exhaled a peculiar ethereal odour, which pervaded the whole ward, and attracted the attention of the other patients. After returning from a walk, he was seized with intense dyspnœa, became subse-

quently comatose, and died twenty-one hours after the commencement of the attack. The blood was examined during the coma, without any deviation from the normal appearance being noticed. Some blood drawn from the arm by venesection coagulated normally, and the serum was distinctly milky, though not more so than is compatible with a physiological condition. At the *post mortem* examination a considerable quantity of blood was collected; after some hours a creamy layer floated to the surface, which formed about one-sixth of the total volume of the liquid. This was found to be composed of oil-globules; and an analysis of the blood showed it to contain 13.55 parts of fat per thousand. The lungs, kidneys, and brain in this case were scrupulously investigated by Dr. Dreschfeld without the discovery of any embola.

In a second case, which exhaled an intense ethereal odour and terminated by dyspnœa and coma, the blood *post mortem* was found to possess the acetone-like odour, and an analysis showed it to contain only 1.88 parts of fat per thousand.

Dr. R. H. Fitz has reported the case of a patient dying comatose after a few weeks' illness (*Boston Med. and Surg. Jour.*, Feb. 10th, 1881). *Post-mortem* examination was negative as regards all the organs, except the lungs, which contained a small number of fatty embola. The blood had a sour smell, and contained a large quantity of fat, fatty granular matter, and acetone; the bladder contained urine, which, on testing, gave the reaction of sugar.

Von Jaksch has published a case of diabetic coma in a boy, aged 13, which came on three weeks after the first symptoms of the disease showed themselves; the boy died in four days, with a rectal temperature of 91.9 deg. Fahr. The *post mortem* examination showed great emaciation, atrophy of the pancreas, catarrhal pneumonia in both lungs, catarrh of the colon, and traces of cured typhoid fever. The blood examined during life showed destruction of the red corpuscles, but no fat drops. The urine gave a red coloration with ferric chloride, and on shaking with ether acetone was obtained from it. He also describes a case of acetonæmia, in a boy who was not the subject of glycæmia, and who recovered completely after free purgation (*Prager Med. Woch.*, 1880, Nos. 20, 21.)

The destruction of the red corpuscles without fat drops in the first case is an interesting confirmation of Foster's observation, which was too hastily assumed by Sanders and Hamilton to have been erroneous.

From these cases it is plain that: 1. all cases of diabetic coma have not milky blood; 2. all cases of milky blood are not fatty blood, as assumed by Sanders and Hamilton; 3. even when fat is present in the blood, fat embola may be absent or very scarce; 4. no proof has been offered of such extensive capillary embola as would account for the alarming symptoms under discussion, especially those of nervous origin. It is, therefore, not too much to say that the theory of Sanders and Hamilton has so far received very little support.

But has the theory of acetonæmia any greater claims to our acceptance? The cardinal fact itself, the presence of acetone in the blood, is much disputed; the smell of the breath undoubtedly resembles the smell of acetone or acetic ether, but the proof of the presence of either in the blood is indecisive; and certainly no quantity sufficiently large has been found to account for the physiological phenomena for which, in experiments on animals, a large quantity is required. But the symptoms are so entirely suggestive of intoxication and, in spite of the differences of chemists, the presence of substances nearly allied to acetone both in the blood and in the urine is so indisputable, that, although we do not pretend that the toxic agent has yet been certainly identified, and may finally resolve itself, as Quincke suggests, into a multiplicity of nearly allied substances, yet the balance of evidence goes entirely in favour of the probability of the theory. The objection that acetone is often eliminated in health is obviously not a very important one; for the poisonous effect of any agent depends upon the quantity in the system, possibly also on the rapidity with which it can be eliminated, and must vary with the state of the individual; and, as Kussmaul suggested, chronic acetonæmia may create a predisposition to the development of acute symptoms from relatively small quantities. It seems probably that acetonæmia must occupy a very similar position to uræmia for some time to come, and that the solution of the problems in each case must wait for the advance of physiological chemistry, and especially for progress in the chemical manipulations of the fluids of the body.

It is quite conceivable that the blood might become so overloaded with sugar that, as suggested by Dr. Cyr, the vitality of the blood-corpuscles might be destroyed; and, in fact, we know that a condition of hyperglycæmia occurs in diabetes, for Pavy (*Croonian Lectures on Diabetes*, London: 1878) has shown that the blood in health contains, on an average, about 0.9 parts of glucose per thousand, but in diabetes the amount may rise as high as 3, 4, or 5 parts per thousand.

But we are entirely without any information as to the pathological relationships of this condition, so that we are not justified in assigning to it at the present any special part in the development of diabetic coma; although, as already remarked, it is quite possible that the excess of sugar in the blood does play a more important part than has been hitherto proved.

We have much less difficulty in assigning a proper value to the last of the causes we have to consider. We know so well the vital importance of the integrity of the cardiac muscle, and the fatal dynamical results that must ensue whenever its structural integrity is impaired, that, once we have had sufficient evidence that such a condition is frequent, we shall readily assent to the proposition that it may be regarded as a highly important factor in determining the fatal termination of these accidents.

Dr. Richard Schmitz of Neuenahr (*Berl. Klin. Woch.*, Jan. 36, 1870; London Medical Record, 1876, p. 200) has described fatty heart as an extremely common condition amongst diabetics. He says that, out of 109 diabetics, in 80 he could discover the objective symptoms of fatty heart; these being, according to Dr. Schmitz, shortness of breath, small soft pulse, weak cardiac impulse, and weak sounds, especially the first sound. Of these 80 persons, 12 died suddenly in their own homes. In two patients, who had overtaxed the powers of their hearts by a very fatiguing journey, Dr. Schmitz observed a high degree of insufficiency of cardiac action. His urgent counsels to rest the over-worked organ were unfortunately not attended to. In consequence of this neglect, the patients suddenly collapsed and died. In seven other cases bodily exertion brought on symptoms which threatened to be fatal, but ab-

solute rest in a horizontal position, and the use of stimulants caused the threatening symptoms to disappear.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. Yeo, Burney.—On Treatment of Asthma at Mont Dore. (*Practitioner*, July 1881, p. 1.)
2. Fraser, D. M.—On the Bath Treatment of Scarlet Fever. (*Ibid.*, July 1881, p. 35.)
3. Hulke, J. W.—On Chian Turpentine in Cancer. (*Lancet*, June 1881, p. 1019.)
4. Allen, J. W.—Of enemata instead of Purgatives to Relieve Constipation in Typhoid Fever. (*Lancet*, June 1881, p. 1025.)
5. Cottle, Wyndham.—On Chaulmoogra Oil and Gynocardic Acid. (*Brit. Med. Jour.*, June 1881, p. 99.)
6. Crane, Albert.—On Chrisma as a Parasiticide. (*Lancet*, July 1881, p. 76.)
7. Hamilton, R., and Hope, S. Wilson.—On Inhalation in Phthisis. (*Brit. Med. Jour.*, July 1881, p. 10.)
8. Tilt, E. J.—On Bromides in Relation to Travelling. (*Ibid.*, July 1881.)
9. Fränkel, A.—On the Preparations of Digitalis. (*Charité Annalen*, Band vi.)
10. Tholen.—The Treatment of Malignant Lymphosarcoma with Arsenic. (*Arch. für Klin. Chir.*, Band xvii.)
11. Goumy, A.—On the Treatment of Typhoidal Pleurisy. (*Revue de Thérap.*, p. 331.)
12. Cheron.—On the Treatment of Lumbo-Abdominal Neuralgia. (*Revue des Maladies des Femmes.*)
13. Seguin, E. C.—Hyoscyamia as a Hypnotic and Depresso-Motor. (*Arch. of Med.*, April 1881.)
14. Traube, M.—On Sugar of Milk. (*Deutsche Med. Woch.*, No. 9, 1881.)
15. Eulenberg.—Hypodermic Administration of Iron. (*Ibid.*, p. 208, 1881.)
16. Legras. — Medicated Crayons. *Repertoire de Pharm.* and *New Remedies*, July 1881.)
17. Kubassow.—On the Action upon the Fœtus of Medicines taken by the Mother. (*Dissertation Russisch. Centralb. für Gynæcol.*, No. 26, 1881.)
18. Brachet.—The Cure of Coxalgia by the Magnet.
19. Law, J.—The Mitigation of Disease Germs by Oxygen. (*New York Med. Record*, No. 25, 1881.)

1. *Yeo on the Treatment of Asthma at Mont Dore.*—Dr. Burney Yeo records in the *Practitioner*, July 1881, p. 1, his experience of the treatment of asthma at Mont Dore, which has rendered more permanent service in cases, of both spasmodic and catarrhal asthma, than any other plan hitherto adopted. Dr. Yeo is evidently not sanguine as to the same amount of success following a similar treatment in other places than Mont Dore itself, since in his opinion the altitude, 3,400 feet above the level of the sea, constitutes an important element of success. The routine treatment is as follows:—The patient, rising at 5 a.m., is enveloped in suitable clothing, and carried off in a sedan-chair to the hot spring, where he drinks a glass of the water; he is then taken to the bath-room, where he may probably be ordered to take only the foot-bath and the hot douche to the spine, or a vapour douche, or he may take a half bath, or in some cases the whole bath, the heat of which is occasionally raised even to 113 deg. Fah. in refractory cases. After ten to thirty minutes of the bath he is wrapped up in hot linen and dried, and next conveyed to the 'Salles d'Aspiration;' here he is dressed in a loose thick flannel dress. He remains breathing this hot moist atmosphere, charged with vapours of the mineralised spring, twenty minutes to an hour. After this he is carried, warmly clothed, again to the hot spring to drink another glass of water, and thence he is conveyed to his bed, which has been well *heated by a warming-pan, and he is enjoined to remain there an hour or more.*

2. *Fraser on the Bath Treatment of Scarlet Fever.*—Dr. D. Manson Fraser of the Homerton Hospital, contributes a paper on this subject to the *Practitioner*, July 1881, p. 35. Twenty-one cases were thus treated, of which two died. An instructive paper is thus concluded—'Although I do not believe that the bath treatment is a specific for scarlet, or any other fever, yet I do regard it as a valuable instrument in combating the disease. Any method of treatment that can reduce temperature, change sleeplessness and delirium into quiet rest, which averts the necessity for the use of the knife, and holds out a hope for the prevention of deafness, ought to have a recognised place in the therapeutics of scarlet fever." (Dr. Fraser states that the use of the bath has hitherto been in scarlet fever 'haphazard and occasional; it has never yet, so far as I am aware, been systematically put to the test in hospital practice; and it is barely mentioned in our best text books.' A reference to the Medical Digest, Section 80-3 will show that a host of observers have recorded their experience of the cold bath, cold effusion, cold packing, cold air, as well as hot baths, &c.

3. *Hulke on Chian Turpentine in Cancer.*— Mr. J. W. Hulke reports six more cases in the *Lancet*, June 1881, p. 1,019, that show the utter worthlessness of Chian turpentime in any cases of cancer, it neither checking the progress of the disease, relieving the pain, nor arresting the hæmorrhage.

4. *Allan on Enemata instead of Purgatives to relieve Constipation in Typhoid Fever.*—Mr. J. W. Allan, in the *Lancet*, June 1881, p. 1,025, advocates the use of enemata in cases of typhoid fever attended with constipation, the action being effective, immediate, and obtained without any disturbance of the higher portions of the bowels.

5. *Cottle on Chaulmoogra Oil and Gynocardic Acid in Skin-Diseases.*—Mr. Wyndham Cottle, in the *British Medical Journal*, June 1881, p. 999, finds that gynocardic acid—the active principle of chaulmoogra oil—may be used with great advantage, both internally and externally, in many skin-diseases. In nearly all cases, a marked increase of weight took place while either of the drugs was administered internally. Gynocardic acid can be given in pills, in doses of half a grain, thrice daily, gradually increasing to two grains thrice a day.

6. *Crane on Chrisma as a Parasiticide.*—Dr. Albert Crane, in the *Lancet*, July 1881, p. 76, draws attention to the great value of chrisma in parasitical diseases. Cases of scabies, phthiriasis, pediculi, and tinea tonsurans, have been, in Dr. Crane's hands, all equally expeditiously cured by a very few applications of the drug.

7. *Hamilton and Hope on Inhalation in Phthisis.*—In the *British Medical Journal*, July 1881, p. 10, Mr. Robert Hamilton draws attention to the great value of carbolic acid inhalations suggested by Dr. W. Williams, viz., by occasionally saturating a piece of Lister's carbolic gauze with a solution of the acid. At page 81, Mr. S. Wilson Hope suggests a cheap and efficient respirator constructed as follows. 'Cut from an ordinary roll of wadding two pieces large enough to cover the nose and mouth; a dia-

mond shape answers very well. Now remove the skin-like substance which coats the pieces; put them together, and fold them in a piece of thin muslin, to the ends of which ribbons may be sewn, and your inhaler is made.' Five or ten drops of creosote are placed between the layers of wool, which are frequently changed.

8. *Tilt on Bromides in relation to Travelling.*—Dr. E. J. Tilt in the *British Medical Journal*, July 1881, p. 11, speaks favourably of the influence exerted by large doses of bromides upon weak and delicate travellers. A dose of 25 grains at bedtime will often secure so good and restful a night as to enable one, otherwise unfitted for the exertion, to travel with safety and comfort. RICHARD NEALE, M.D.

9. *Fränkel on the Preparations of Digitalis.*—Dr. A. Fränkel (*Charité-Annalen.*, Band vi) says that the leaves of digitalis have an effect upon the circulation, which differs greatly according to their source, and possibly also to their freshness. The German Pharmacopœia prescribes a watery extract prepared from the pressed leaves; an alcoholic and an ethereal extract; and, finally, one obtained with the help of vinegar. The tincture is made by treating crushed portions of the fresh plant with six parts of alcohol; while the acetum is obtained by maceration of the dry leaves with a mixture of one part of alcohol and nine parts of vinegar. About ten grammes of the tincture are considered equal to one part of weight of the leaves of the digitalis. Digitalis, when given in small doses, has a very different effect from that obtained by large quantities. The latter are chiefly administered in cases of acute inflammation, attended with fever, while the former are employed to remove the troubles observed in heart-disease, in the so-called stage of compensatory disturbance. While the effect of smaller doses (0.5 to 0.75 gramme daily) is retardation of the contractions of the heart with increased arterial tension, larger doses (1.0 to 1.5 gramme daily) are followed by diminished arterial expansion and reduced frequency of the pulse, not unfrequently accompanied by collapse and vomiting. These latter doses were therefore administered as an antiphlogistic and antifebrile in pneumonia, pleurisy, pericarditis, and acute rheumatism, especially when the disease was naturally inclining towards a crisis and recovery. Traube explained this influence of digitalis in reducing temperature by its action upon the vaso-motor nervous system, and the vascular expansion of the skin especially. Traube's experiments have shown that the smaller doses in heart-diseases, by exciting the vagus nerve, retard the beating of the heart, and, by increasing the pressure of the aorta, regulate the adduction of a sufficient quantity of arterial blood to the myocardium, so that this organ recovers from its previous state of exhaustion, and is once more enabled to contract energetically. Only when the poisonous effect increases, paralysis of the cardiac nervous system and sinking of the blood-pressure set in. Böhm has since proved, by experiments on the exposed hearts of frogs, that digitalin has a specific effect upon the cardiac muscle itself, and upon the terminal branches of the vagus nerve connected with it, whereby the remarkable phenomena in the action of the heart are chiefly called forth. In order to test the activity of the different preparations of digitalis used in practice, dogs of middle size were curarised and injected subcutaneously with the infusion, the tincture and the acetum (the alcohol and vinegar having been removed), and the beginning of the retardation of the pulse and the enlargement of the single beats were considered as the commencement of the action. The following were the results. 1. The tincture, and also the acetum and the infusion of digitalis, are capable of exercising an exciting influence upon the inhibitory nerves of the heart, and upon the vaso-motor centre; but there are unmistakable grades of distinction in the action of the three preparations. 2. The tincture is the least reliable. 3. The action of digitalis—retarding of the pulse and increased blood-pressure setting in, after divers large doses of both the infusion and the acetum—sets in according to the individuality of the animals, and other accessory circumstances. 4. The acetum digitalis is the most powerful.

10. *Tholen on the Treatment of Malignant Lymphosarcoma with Arsenic.*— Dr. F. Tholen (*Arch. für Klin. Chir.*, Band xvii) reports four cases of lymphosarcoma, in three of which the course of the disease was greatly influenced by arsenic, while in the fourth case the disease had already advanced too far towards a fatal result. The first case was that of a man, aged 47, who suffered from an infiltrated epithelioma in the right angle of his lower jaw, of three months' duration. It could not be operated upon, because of the extent and infiltration of the neighbouring lymphatic glands, and was therefore treated with arsenic. From May 26 until the end of December 1872, the patient took Fowler's solution; partly internally, from five drops a day to fifteen drops twice a day, and partly in the form of parenchymatous injections into the tumour, ten drops each time, amounting altogether to 748 drops internally and 76 injections. This treatment resulted in the complete disappearance of the tumour. The patient was discharged on January 15, 1873, and, on returning in April 1873 and in February 1874, he showed no sign of recurrence. Examination of a small particle taken from the margin of the ulcerating tumour indicated a lamellar epithelioma, yet the appearance of the disease, as well as the favourable action of the arsenic, rather suggested an infiltrated malignant lymphosarcoma. The author, therefore, thinks it probable that epidermic cells from the adjacent healthy epidermis might have been present when the examination was made. From these cases, although few in number, Tholen is led to ascribe to arsenic a positive salutary action against cancerous ulcers, especially lymphosarcomata, which, in fact, are nearest to inflammatory neoplasms, and are quickly dispersed by other agents as well. A mischievous result has been several times observed by Billroth to follow this rapid breaking up, when iodide of potassium was energetically administered.

11. *Goumy on Typhoid Pleurisy.*—In certain very rare cases, acute pleurisy may take on a typhoid form which is extremely serious, and almost always ends fatally. Dr. A. Goumy, who has studied this disease very carefully, thus summarises in his inaugural thesis the indications for treatment (*Revue de Thérap.* p. 331). To keep up the general condition of the patient by hygienic measures, tonics, in large doses, given at an early stage, are the most urgent indication. Subsequently, the pleural liquid must be evacuated as early as possible. One puncture is made, then a second, and if the general condition do not improve, pleurotomy is resorted to. Professor Bouchard is greatly in favour of this treatment; two out of three cases, under his care, recovered under this treatment. The incision of the thoracic wall disengages the lung, and favours its gradual and progressive expansion. Antiseptic washings-out prevent

any danger of putrid infection; for this purpose carbolic acid, sulphate of zinc, a three per cent. solution of salicylic acid which has been employed by Potain, and a five per thousand of chloral which has been employed by Villemin, are all recommended. According to the recent statistics compiled by Robert, pleurotomy has yielded 78 cures out of 114 cases. These figures are satisfactory, especially if the frequency of symptomatic pleurisy be taken into account.

12. *Cheron on the Treatment of Lumbo-Abdominal Neuralgia.*—Dr. Cheron summarises as follows, in the *Revue des Maladies des Femmes*, the indications for the treatment of lumbo-abdominal and lumbo-sacral neuralgia. The first step to be taken, is to ascertain if this affection be in connexion with a functional disturbance of the utero-ovarian apparatus, or with a diathetic affection of these organs. In the first case, the treatment of the uterine affection, and the external spinal treatment, will easily dispose of this neuralgia; but if it be in connexion with an uterine affection of diathetic and constitutional origin, it will be indispensable to add to the local uterine and external spinal treatment a general treatment intended to attenuate the effects of the diathesis. If the case be one of a chlorotic patient, iron, manganese, and narcotics will be indispensable. Iodide of potassium, essence of turpentine, and quinine, are very useful in arthritic cases.

13. *Seguin and others on Hyoscyamia as an Hypnotic and Depresso-Motor.* — In the *Archives of Medicine* for April 1881, is a report by Dr. E. C. Seguin, on the use of hyoscyamia as an hypnotic and depresso-motor. It is based on the experience of the Committee on Neurotics of the Therapeutical Society. The drug, of Merck's manufacture, can be procured in pill form from Mr. Martindale and Messrs. McKesson & Robbins. These two firms supply reliable pills made of the crystalline form. Dr. J. C. Shaw having made a somewhat extensive trial of hyoscyamia in cases of insanity, gives the following results of his experience. This drug is of great service in acute mania, where the patient, from loss of sleep, and continued motion, soon becomes exhausted, and then has dry tongue, sordes on the teeth, and, perhaps, diarrhœa. If the patient refuse food, and have to be fed with the tube, this makes the state of matters still worse. Hyoscyamia is a remedy which obviates this condition very largely; it is certain in its action. He usually began by giving one-fourth to one-half grain of Merck's amorphous alkaloid, by the mouth. He has also used it in chronic mania with excitement and destructive habits, in the excitement of general paretics, in the maniacal phenomena following epileptic seizures, etc. The effects are temporary as a rule, most patient becoming quickly tolerant of it, and the dose has to be increased. Dr. A. B. Ball reports two cases to illustrate the marked efficiency of the alkaloid as an hypnotic in acute and subacute mania, the influence of the drug in controlling delusions, and its occasional tendency to paralyse the bladder. Dr. F. P. Kinnicutt found it serviceable in a case of delirium tremens, where 75 grains of chloral and 125 grains of bromide of potassium had failed to relieve. One-fiftieth grain of Merck's crystalline preparation, administered by the mouth twice a day, was found to be sufficient. Apart from the hypnotic action of the drug, the only effects observed were hallucinations of a pleasant kind, and slight dryness of the throat. No alterations of temperature occurred. Dr. E. C. Seguin is inclined to think that a parallelism may be drawn between the arrest of morbid dreams and the effect of hyoscyamia in cases of delirium tremens, delusions of persecution, etc. He records an instance where a patient, who was hypochondriac to a certain extent, had suffered from insomnia, which was made the more trying, because what little sleep he obtained was troubled by fantastic and fearful visions of a panoramic character; scenes of violence, obscenity, comicality, would, as it were, pass before him almost with the vividness of hallucinations. Indeed, he had the same 'visions' at any time if he dozed for a minute in his chair. Injection of three grains of camphor failed. The crystallised hyoscyamia, in doses of one-sixty-fifth of a grain, by hypodermic injection, at bedtime, was given chiefly with the view of procuring sleep, and marked relief was obtained, the depressing and fearful dreams becoming less marked. The following interesting case is contributed by Dr. A. H. Smith. The patient was a male, aged sixty-five. Three of his brothers and sisters died insane, two of them by suicide. For the past two years he has been gradually developing melancholia, recently becoming rapidly worse. He was very restless, sleepless, unmanageable, wandering about the house, talking wildly and excitedly. Pending his removal to an asylum, Dr. Smith advised the administration of one-fiftieth grain of crystallised hyoscyamia, to be given night and morning. This produced sleep at night, and rendered the patient quiet and manageable during the day, to the great relief of the family and his own comfort.

14. *Traube on Sugar of Milk.* — M. Traube (*Deutsche Med. Woch.*, 1881, No. 9) recommends sugar of milk as a mild and reliable purgative. From 9 to 16 grammes (140 to 250 grains) of it, dissolved in about a fourth of a litre of warm diluted milk, are taken before breakfast. The author himself took as much as 24 grammes without any hurtful result.

15. *Eulenberg on Hypodermic Administration of Iron.*—Eulenberg (*Deutsche Med. Woch*, 1881, p. 208), speaking of the hypodermic administration of iron, states that the most convenient preparation for this purpose is, in his opinion, the pyrophosphate, with citrate of sodium—a preparation to be recommended on account of the large proportion (26.6 per cent.) of iron which it contains. In watery solution (1 to 5) it may be used without local irritation. Within half an hour the urine shows iron.

16. *Legras on Medicated Crayons.*—The following are formulæ recommended by Legras (*Repertoire de Pharmacie* and *New Remedies*, July 1881) for crayons to be used in the treatment of affections of the eyes and face. They are enveloped in tinfoil and paper, to keep them from melting in the hand. 1. *Crayon of Red Precipitate*—Red precipitate, 23 grains; glycerin, 150 grains; cacao butter, 300 grains. 2. *Crayon of Oil of Cade*—Oil of cade, 15 dwts.; glycerin, 150 grains; cacao butter, 300 grains. 3. *Crayon of Iodoform, deodorised*—Iodoform, 460 grains; oil of peppermint, 6 dwts.; glycerin, 150 grains; cacao butter, 300 grains. 4. *Crayon of Corrosive Sublimate*—Corrosive sublimate, 15 grains; glycerin, 200 grains; cacao butter, 415 grains. 5. *Crayon of Balsam of Peru*—Balsam of Peru; glycerin (or vaseline), each 75 grains; cacao butter, 300 grains. 6. *Crayon of Turbith Mineral* (*yellow Subsulphate of Mercury*)—Turbith mineral, 15 grains; salep in fine powder, 30 grains; glycerin, 150 grains; cacao butter, 300 grains. 7. *Crayon of Tar*—Norway tar; vaseline, of each 75 grains; cacao butter, 300 grains. 8. *Crayon of Opium and Belladonna*—Extract of opium; extract

of belladonna, glycerin, of each 75 grains; cacao butter, 300 grains. *Ophthalmic Crayons*—(*a*) Red precipitate, oxide of zinc, acetate of lead, burnt alum, of each 45 grains; corrosive sublimate, 7 grains; glycerin, 150 grains; cacoa butter, 300 grains. (*b*) Red precipitate, 5 grains; sulphate of zinc, 10 grains; vaseline, 150 grains; cacoa butter, 300 grains. (*c*) Red precipitate; camphor powder, acetate of lead, of each 23 grains; vaseline, 150 grains; cacao, 300 grains.

17. *Kubassow on the Action upon the Fœtus of Medicines taken by the Mother.*—Using the microphone, Dr. Kubassow has observed the effect on the heart of the fœtus of medicines taken by the mother (*Dissertation*: *Russisch. Centralb. für Gynækol.* 1881, No. 26). 1. Chloroform and chloral-hydrate, he finds, have first a stimulant, then a sedative effect on the fœtus, this last effect being evidenced by the dulness and infrequency of the heart's beat and the greater quietness of the fœtus. They act within five to ten minutes, chloral more powerfully than chloroform, and especially so if given per rectum. 2. Opium and its alkaloids cause prolonged irregularity of the heart's beat in the fœtus, acting more slowly but for a longer period than chloral or chloroform. Opium acts more powerfully per os than per rectum. 3. Digitalis has also a powerful and prolonged action on the fœtus. Dr. Kubassow believes, from chemical examination, that a dose of chloral hydrate taken by the mother is divided within fifteen minutes between herself and her child in proportion to their weights. The practical conclusion is that more than thirty grains of chloral-hydrate will be dangerous to the child, if given at once *per rectum* or repeated sooner than in half an hour. The same holds for one and a half grains of opium, as tincture, repeated sooner than in an hour.

JAMES ANDERSON, M.D.

18. *Brachet on the Cure of Coxalgia by the Magnet.*—Dr. Brachet of Aix les Bains describes the case of a young Scotch lady, who came under his care originally for pain in the region of the ovary, which yielded readily to the application of a magnet, and subsequently was supposed to suffer from diseased hip-joint, for which she was treated for some time in her own country, and at length came to Aix. He found her anæmic and chlorotic, wasted, with exaggerated nervous sensibility, irritability, depression, sleeplessness, distaste for food; the pain in the hip was constant, violent, made worse by all attempts to walk, worse in the evening, a little better in the morning; over the region of the joint there was great hyperæsthesia when a small part was touched with the finger, less when pressed firmly with the whole hand; all the symptoms being exaggerated before her periods. There was no change in the colour of the skin or of the temperature of the affected joint, and no general elevation of temperature at night. After consultation with Dr. Provost a hysterical affection was diagnosed and the magnet applied, by which means the patient was slowly but surely cured in two months, and has remained quite well up to the present, six months after discontinuing the treatment.

19. *Law on the Mitigation of Disease Germs by Oxygen.*—J. Law (*New York Med. Rec.*, 1881, No. 25), in a series of observations on hog cholera, has come to the conclusion that the disease-germ of this affection varies in its potency according as it grows in a medium in which oxygen has free access or in one to which only a limited amount can find its way. He gives the result of series of experiments on pigs in support of this view, and quotes the researches of Pasteur, Buchner, Greenfield, and others.

ROBERT SAUNDBY, M.D.

MEDICINE.

RECENT PAPERS.

1. NOTHNAGEL.—The Clinical Aspects of Intestinal Diseases. (*Zeitsch. für Klin. Med.*, vol iii, p. 241, 1881.)
2. STEWART, GRAINGER.—Paralysis of Hands and Feet from Disease of Nerves. (*Edinb. Med. Jour.*, April 1881.)
3. RIEGEL, F.—The Diagnosis of Pneumothorax. (*Berl. Klin. Woch.*, No. 50, 1880.)
4. FEUERBACH, L. A.—Constant Rhythmical Movements of the Larynx and Tongue, Dependent on the Heart's Movements. (*Ibid.*, No. 47, 1880.)
5. PIERSON, R. H.—On Heredity in Cardiac Valvular Lesions. (*Jahr. der Gesell. für Natur und Heilk.*, 1880-81.)
6. THOMAS, J. G.—On Dengue. (*New Orleans Med. and Surg. Jour.*, May 1881.)
7. DESSAU, S. HENRY.—On Pertussis. (*American Jour. of Obstet.*, April 1881.)
8. VON LEUBE.—Syphilis of the Lungs. (Virchow's *Archiv*, Band lxxxii.)
9. BAUMULLER.—A Case of Acute Fibrinuria (Virchow's *Archiv.*)
10. PUNIER. — On Diphtheria and Tracheotomy. (*Deutsche Zeitsch. für Chir.*, Band xiv.)
11. BRIEGER, L.—On a Case of Chyluria. (*Zeitsch. für Physiolog. Chemie*, and *Centralb.*, No. 20, May 14.)
12. BUCH, M.—Some Symptoms of Tabes. (*Archiv für Psych.*, Band xi.)
13. LEYDEN.—On Chronic Cervical Myelitis. (*Zeitsch. für Klin. Med.*, Band ii, p. 455.)
14. JARISCH.—On the Coincidence of Diseases of the Skin, and of the Grey Matter of the Cord. (*Vierteljahrsch. für Derm. und Syphil.*, 1880, p. 195.)

1. *Nothnagel on the Clinical Aspects of Intestinal Diseases.*—To determine whether conclusions can be drawn from the condition of the fæces as to the nature of the pathological process in the bowels, and as to the seat of the disease, whether in the rectum, colon, or small intestine, is the object of an extremely able article by Professor Nothnagel (*Zeitsch. für Klin. Med.*, vol. iii, p. 241, 1881). He concerns himself almost exclusively with the macroscopic and microscopic examination of the fæces, since this method of investigation is of much greater practical importance to the physician, and much more readily carried out, than chemical analysis. This article embodies the results of the examination of more than 800 fæces. In many cases the examination was conducted daily until death, and most people will agree with Nothnagel when he remarks that such investigations are not amongst the most delightful. In regard to consistence, he divides fæces into three classes—the firm, the pap-like (*breiig.*), and fluid, the first of which are generally normal, the others pathological. The most important clinically is the variety of pap-like consistency which is occasioned by a very intimate mixture of mucus. Often the naked eye detects nothing resembling mucus, but microscopically its presence is readily made out. Such consistency may be occasioned by admixture of fat, water, parenchymatous tissue of vegetables, and fruit, etc. Fluid fæces can never, according to Nothnagel, be occasioned by the consumption of large quantities of water. In five cases of diabetes insipidus which he recently watched, there was nothing of this kind.

Hard fæces in small balls, like the fæces of sheep, are not, according to Nothnagel, at all a certain indication of obstruction. With regard to reaction, there is considerable variety, fæces being acid, neutral, or alkaline at different times. In typhoid fever they are as a rule alkaline (though, exceptionally, Nothnagel has found a strong acid reaction); and in a doubtful case, if the reaction were not alkaline, it would go against the diagnosis of typhoid. The colour of the fæces may be affected by various articles of diet and medicine; the only important point is the reaction of bile-pigment, which may be frequently met with. Crystals of triple phosphate may be found in any stool, and they are not met with in typhus dejections in greater quantity than normal. Salts of lime (including oxalates) occur also in the fæces, but they appear to be of no diagnostic value. Cholesterin is a component of normal fæces, and does not possess any significance. 'Charcot's crystals' are also to be found. Of the various articles of diet which appear in the fæces, Nothnagel only touches upon such as are of particular diagnostic importance. *Starch.* In the normal condition, with an ordinary mixed diet, starch-granules do not appear in the stools, but small irregular particles, which colour blue with iodine, occasionally do occur. Any deviation from this is pathological. Muscular fibre is to be found in small quantity in normal fæces with mixed diet, but occurs to a great extent when much animal food is taken (diabetes); and it is particularly interesting to observe that in many intestinal diseases muscular fibre is to be found in large quantity in the stools, even in cases where starch does not appear, shewing how much more readily the latter undergoes digestion than the former. Fat occurs in normal fæces both in drops and in needles. Sometimes Nothnagel has found it n large quantity without any pancreatic disease. Milk, in the form of coagulated flakes, shewing countless enclosed oil-globules, is often seen in normal fæces. Such are the more important articles of food which occur in the stools. Regarding mucus, many important diagnostic indications may be derived from its presence in the fæces, in what form it appears, whether it is coloured or colourless, and in what way it is mixed up with the fæcal matter. In the adult, no mucus is to be found either macroscopically nor microscopically in normal fæces. Its occurrence is always pathological, and it may appear either (*a*) as a thin layer over well-formed fæces, or (*b*) intimately mixed up with the fæcal matter, or (*c*) the fæces may consist entirely of mucus, (*d*) as mucous cylinders in the so-called tubular diarrhœa, (*e*) in balls resembling boiled sago-grains. The latter form Virchow has considered as of vegetable origin. And, finally, Nothnagel describes a new appearance (*f*), in which the mucus takes the form of round yellow balls, quite unlike sago. The epithelium which frequently occurs in the sputum undergoes certain changes in shape, which Nothnagel describes with great minuteness, and for which the original article must be consulted. The 'round cells' which occur in the fæces have some diagnostic significance. They vary in size from that of small white blood-corpuscles up to that of the largest giant-cell. In simple catarrh of the intestine, mucus containing round cells does not occur. Its presence in the fæces indicates an ulcerative process. Nothnagel states nothing new regarding the presence of blood in the fæces; and to the presence of animal parasites, their eggs, etc., in the fæces, we need not here allude. Nothnagel proposes, in a continuation of this article, to consider the clinical bearing of the appearances here touched upon.

2. *Stewart on Paralysis of Hands and Feet from Disease of Nerves.*—Professor Grainger Stewart (*Edinb. Med. Jour.*, April 1881) describes three cases in which the symptoms pointed to peripheral disease of nerves, one of which died from double pneumonia, thus affording an opportunity for confirming by *post mortem* examination the diagnosis formed at the bedside. All three cases so closely resembled each other, as to leave no doubt that they were examples of the same malady. The disease was ushered in by severe pains in the hands, feet, legs, and arms, accompanied by tingling, defective sensibility, and paresis, passing on to complete paralysis in the regions affected, along with atrophy of the muscles involved. The recovery, which took place in two of the instances recorded, occurred slowly, all the symptoms abating until the normal functions were completely restored. The clinical features which seemed to be the most important were 'the co-existence of symptoms referable to the sensory, motor, and trophic functions of the nerves, the localisation of the symptoms in the hands and feet, the intensity being greatest at the most distal points, and the affection corresponding to certain districts of the extremities, and not to the distribution-areas of particular nerves'. A logical examination of these symptoms showed that they must be referred to the nerves, to the spinal cord, or to the brain. Now, it is certain that no known facts warrant the belief that any individual part of the brain determines all kinds of innervation in individual parts of the body, and still less that lesion of any part should be capable of producing symptoms so curiously distributed. It was thus clearly not to be referred to the brain. Were it of spinal origin, due to some affection of the cord at a point corresponding to the origin of the nerves for the hands and feet, it would have to be assumed that the lesion was bilateral, and sufficiently extensive to involve sensory, motor, and trophic structures, but at the same time to affect these only so as to produce symptoms involving the ultimate distribution of certain nerves and the different nerves in such proportion as to mark off precisely certain areas, bounded by lines encircling the limb (for such was the localisation of the symptoms in these cases); and, furthermore, it would be necessary to assume that the lesion in the upper part of the cord affecting the hands was such as not to interfere with the transmission of sensory impressions from the lower parts of the body upwards, or with motor impressions downwards (both of which nerve functions were intact). Such a conclusion is certainly not consistent with our present knowledge of the physiology of the spinal cord. Dr. Grainger Stewart was thus led by a process of exclusion to the diagnosis that the symptoms arose from peripheral disease of nerves. The third case in which this diagnosis was made died from double pneumonia, and the *post mortem* examination showed that there was degeneration in the median, ulnar, and tibial nerves, commencing with swelling of the axis-cylinder, which underwent degeneration in its whole course. The nerves in the brachial plexus were, however, in a healthy condition. In the spinal cord there were distinct changes, which were situated in part of the cervical enlargement, and to a less degree in the dorsal enlargement. The columns of Goll on both sides were affected, and also the most superficial and posterior part of the lateral columns, including part of what Flechsig terms the direct cerebellar tracts.

It did not affect any part of the grey matter, neither were the nerve-roots involved. Such a localisation is distinctive of what is known as one of the forms of Türck's secondary degenerations, viz., the ascending; and hence the author is fully justified in his conclusion that these changes were purely secondary, and could not explain the symptoms in the case. This account of minute lesions is accompanied with an excellent plate. After giving an exhaustive account of the literature bearing on this subject, Dr. Grainger Stewart proceeds to sketch the clinical history of the disease, of which we may briefly indicate the main points. Commencing with more or less fever, the first symptom which attracts attention is pain, numbness, and loss of sensibility in the affected parts, along with paresis in the muscles of the most distal points of the limbs, spreading upwards, and affecting one group of muscles after another. The organic reflexes are very rarely modified, but those of the skin are affected in proportion to the diminution of sensibility in the parts, being sometimes wholly absent. The plantar reflex is often altered, while those higher in the body remain unaffected. The patellar tendon-reflex appears to be early and completely lost in these cases. Movement, which is at first lost in the fingers and toes, affects next the ankles and wrists, and then the limbs, until at last the patient lies completely helpless. There is no special interference with the co-ordinating functions. The vaso-motor and trophic functions are affected, as is shown by atrophy of the muscles and changes in the skin. The process takes some weeks or months to arrive at its height, and then gradually improvement sets in, commencing in the upper limb. Recovery may never be quite complete. Finally, Dr. Grainger Stewart concludes this highly interesting paper by marking off this peripheral paralysis from certain other affections for which it might be mistaken, such as Landry's acute ascending paralysis, Duchenne's general spinal paralysis, transverse myelitis, diphtheritic paralysis, etc.; but for this and for the minute description of these cases the original must be consulted.

J. Graham Brown, M.D.

3. *Riegel on the Diagnosis of Pneumothorax.*—F. Riegel (*Berl. Klin. Woch.*, 1880, No. 50) observed in a case of pneumothorax a sound analogous to the so-called water-pipe murmur of Unverricht, a peculiar, bubbling, gurgling murmur, with a metallic resonance, at first during both inspiration and expiration, later only during inspiration. He holds this murmur to be pathognomonic of an open pulmonary fistula, and calls it pulmonary fistula murmur (lungenfistelgerausch).

4. *Feuerbach on Constant Rhythmical Movements of the Larynx and Tongue dependent on the Heart's Movements.*—L. A. Feuerbach (*Berl. Klin. Woch.*, 1880, No. 47) describes the case of a soldier, aged 21, who, after a blow on the side two centimètres above the nipple, at first showed no sign of injury, but on the following day and during sleep presented a downward movement of the larynx and tongue, twice for each heart's beat. After ten to twenty movements of the larynx followed a movement of deglutition. Contraction of the muscles concerned was not observed. By auscultation, he found that the first movement accompanied the first sound, and the second the second sound. Swallowing was not interfered with; only very large pieces caused a sense of roughness and obstruction at the junction of the third ribs with the sternum. The conduction of the heart's impulse to the larynx and tongue was effected, according to Feuerbach, by swelling of the lymphatic glands in this situation. The patient recovered completely.

5. *Pierson on Heredity in Cardiac Valvular Lesions.*—R. H. Pierson (reprint from *Jahr. der Gesell. für Natur und Heilk.*, in Dresden, 1880-81) gives five cases in which heart-disease existed in parent and child; in three cases, the parent had not suffered from acute rheumatism.

Robert Saundby, M.D.

6. *Thomas on Dengue.*—Dr. J. G. Thomas, of Savannah, Georgia, at the meeting of the American Public Health Association in 1880 (*New Orleans Medical and Surgical Journal*, May 1881), submitted the following views of this peculiar disease. Dengue is self-limited, infectious in character, the specific cause, like that of yellow fever, being as yet beyond our reach. There is absolutely nothing known of its morbid anatomy. It has its own specific germ, which seems to operate, when in the human system, in a specific manner, and is susceptible of transportation. In the vast majority of cases, dengue runs its course in from three to eight days; but during the epidemic which occurred at Savannah it was observed to last much longer. The temperature will rise and fall most irregularly, and at times give hopes that the fever is at an end, and then treacherously return again, and in this way keep up for weeks, or even months. But Dr. Thomas has been unable to see anything like typhoid in it, save that the patients have a continued fever, prolonged into weeks. Such cases need not embarrass our diagnosis, although they are liable to do so; for throughout their course the semiology of dengue will always be present. The swollen and heavy-looking face, like that of a person who has been sitting over a hot fire; the congested and maturating eyes with open pupils, the hebetude of mind, the recurring soreness in the muscles and joints, with hyperæsthesia of the surface; the tough, viscid, ropy mucus in the mouth and throat; the feeling, now and then, of faintness in the horizontal position; the enlarged papillæ of the edge and tip of tongue; the regular bowels, perhaps inclined to be constipated; the great irregularity in the exacerbations and remissions; the constant inclination of the heat to fall below the normal, without any material abatement of the serious symptoms; the intense and peculiar bitterness of taste in the mouth, together with the conspicuous absence of the leading symptoms of typhoid, should enable any ordinary diagnostician to make the distinction. Aside from the nervous complications attending and following dengue, there are no sequelæ so common as those which appertain to the heart. The percentage of cases in which the heart is affected is not stated, but they are quite frequent, and, besides, very distressing, prolonging the convalescence into weeks and sometimes months. Dengue does not affect the heart in the same way that rheumatism is known to do, and in the majority of cases where heart-troubles followed there had been no special rheumatic symptoms primarily. This complication is not apt to occur in the early stages of the disease, but comes on either after the fever has subsided, or after the second or third week of its progress. It may occur in the mild as well as in the severer forms of fever. A very peculiar and characteristic symptom of dengue is a disposition to faint; this feeling often comes over patients as they lie in bed, and sometimes is a very distressing one to them, but examination of the heart reveals nothing that would seem to indicate that pericarditis had occurred as a complication. Partial

facial paralysis is also one of the occasional complications. Peripheral paralysis or paresis of the forearm and brachical muscles now and then occurs. Pulmonary complications may be traced to dengue, which in the early stages assume the form of a troublesome cough, that may remain and annoy long after the fever has subsided. It assumes the form of a catarrh of the fauces, which may extend down to the larynx, or may travel down the œsophagus. In the former, cough is the most conspicuous symptom, and in the latter there is a constant rising of phlegm in the mouth. One attack of the disease does not furnish immunity from a future one. Regarding treatment, since dengue is a self-limited disease, in the vast majority of cases the physician finds it his duty simply to make the patient as comfortable as possible, and allow the disease to run its course, being always vigilant as to the complications which may arise. A mixture of morphia, tincture of gelsemium, and aconite has been found to be a happy combination to meet many of the indications. In the rheumatic type salicylate of soda, in doses of five to twelve grains every two hours, has proved of the most decided benefit.

7. *Dessau on Pertussis.*—In the *American Journal of Obstetrics*, April 1881, Dr. S. Henry Dessau has presented the results of his experience during the past ten years in relation to pertussis. These observations are based on an analysis of three hundred and sixty-one cases, and from them it is observed that the disease attacks children from one to five years of age more frequently than at any other period of life. In regard to the season of the year when pertussis is most prevalent, it would appear that the summer and fall months are specially selected. A continuous rise of temperature, moderate in degree, lasting a week or more, was observed as an early symptom. This fact, taken in connection with a cough, occurring in frequent and short paroxysms, without the physical signs of bronchitis, he justly regards as another of the most certain early indications of pertussis. The value of the sublingeal ulcer as an early dignostic sign is not thought to be great. In 27 cases in which it was observed, the earliest date of its detection was on the fourth day of the whoop. According to Dr. Dessau's experience, the ulcer does not appear prior to the development of the spasmodic stage of the cough. His observations in the treatment have led him to believe that mild cases will end in a short space of time, under any kind of treatment, while in severe cases it is often a difficult matter to find any remedy that will mitigate the severity of the paroxysms and reduce their frequency, and none will shorten the duration of the disease to any marked degree. Chloral and bromide of potassium, in combination, while they undoubtedly moderate the severity of the paroxysms, and also reduce their frequency, do not exert any great influence in shortening the average duration of the disease. The most frequent complication was found to be catarrhal pneumonia. When bronchitis is present as a complication, it may readily be understood that the danger of collapse of air-vesicles is rendered immensely greater, and catarrhal pneumonia may almost certainly be expected. The gravity of catarrhal pneumonia as a complication of pertussis may be inferred, when it is considered that out of ten deaths from all causes, four were from this complication in a total of eleven cases treated.

8. *Von Leube on Syphilis of the Lungs.*—Von Leube relates in *Virchow's Archiv*, Band lxxxii, the case of a man, aged 34, who had been previously infected with syphilis, and two years since was ill with grave phthisical symptoms. The diagnosis was chiefly founded upon a circumscribed disease in the middle and lower parts of his right lung, the apices being free, upon the existence of laryngeal ulcerations and proliferations, and especially upon the histological condition of the expectorated pieces of tissue, which the author considered to be portions of a gummatous neoplasm. A cure was effected after repeated inunctions.

9. *Baumüller on a Case of Acute Fibrinuria.*—Baumüller relates, in *Virchow's Archiv*, the case of a woman, aged 38, who, after a former delivery had suffered from pains in the kidneys and from hæmaturia. After a second and normal delivery she had frequent painful paroxysms of strangury and tenesmus, and passed large masses of a white, compact, slimy matter through the urethra. On being examined it proved to be made up of small particles of the urinary passage, particularly of the renal pelvis and of the ureters. The suggestion that it was fibrin was not confirmed by chemical analysis. It was probably an albuminoid coagulate, although it would not dissolve in acetic acid, and remained unchanged by artificial digestion. The urine contained numerous pus-corpuscles and crystals of ammonio-phosphate of magnesia, but no epithelium. The author considers it highly improbable that it was a case of croupous nephro-pyelitis, on account of the healthy condition of the patient, and the absence of all etiological conditions, but is rather inclined to diagnose acute fibrinuria as understood by Vogel.

10. *Pinner on Diphtheria and Tracheotomy.*—The author's material, collected in the wards of Professor Maas at Freiburg (*Deutsche Zeitsch. für Chir.*, Band xiv), consists of 100, or, rather, 101, cases (including one discharged before cure) of tracheotomy in diphtheria, and comprises the time from April 1st, 1877, to October 1st, 1880. Including 37 cases in which tracheotomy was not performed, there was recovery in 63 cases, or 45.98 per cent., and, deducting 8 adults, there remain 44.27 per cent. As to the frequency and the favourable result of the disease, the sex of the patient made but little difference. Thirty-three cases, or 32.67 per cent., recovered after tracheotomy was performed; but the number varied, as in all diphtheritic patients admitted into the clinic, between 14 and 100 per cent. Regarding the influence of age upon the number of recoveries, the author's experience was confirmed, that there is but little chance of recovery by operation in cases under two years, inasmuch as not one of the 19 operated on recovered. (The case of discharge before cure was under two years of age.) Most of the recoveries after operation, and, indeed, of diphtheritic patients, occurred in those more advanced in life. Most of those affected with the disease or operated upon were from two to six years old, and amounted to 61.83 and 70.29 per cent. respectively. The mortality was greatest on the day following the operation. On the fifth day the prognosis began to be more favourable. There is a predilection at the Freiburg clinic for performing inferior tracheotomy (the head hanging down). In only one was a vascular anomaly observed; a carotid artery ascending on the right side of the trachea. The author highly praises the influence of moist warmth in the form of inhalation.

11. *Brieger on a Case of Chyluria.*—Brieger relates, in the *Zeits. für Physiol. Chemie*, Band iv; *Centralb. für die Med. Wissen.*, the case of a man, aged 23, who was bodily and mentally but little developed,

and was affected with cypho-scoliosis and chorea. He was born in Berlin, which he had never left. The urine passed in the day was mostly of a light yellow straw colour; the night urine had sometimes an opalescent, sometimes an intensely white and milky character. The normal light-yellow portions of urine, with a very sour reaction, were free from sugar, fat, and albumen; but there were found in them here and there shreds, which, under the microscope, were seen to be fibrinous coagula. The chylous urine, when examined under the microscope, contained only very fine granules, and a few red blood corpuscles. When shaken with ether it cleared up, especially if solution of soda had been previously added; but in neither case completely. The urine contained albumen, that is to say, a fibrinogenous substance, besides serum-albumen. Blood-serum, added to the fresh urine, caused an immediate separation of coagula. Peptone did the same. From the ether-extract from a large quantity of urine—5½ litres—the author obtained 189 milligrammes of pure cholesterine, 105 milligrammes of platino-chloride of neurine, and 303 milligrammes of glycerophosphate of barium. The fat contained a considerable quantity of lecithin. In 400 cubic centimètres of a perfectly opaque night urine there were found 0.725 per cent. of fat, 0.395 per cent. of albumen, and 3.4 per cent. of urea. The quantity of fat in some cases considerably exceeds that of lymph. A greater supply of fat, in the form of milk and cod-liver oil, proved to be without any influence upon the quantity of fat, which, however, was reduced to 0.023 per cent. when all fat had been withdrawn from the food.

12. *Buch on some Symptoms of Tabes.*—M. Buch (*Archiv für Psych.*, Band xi) states that, in two cases of tabes, he found the following symptoms, which have been seldom observed, and are rare. In one case the right testicle, especially the epididymis, swelled considerably in the course of a night. Firm pressure caused no pain, and there was nothing abnormal in the penis. The feet, which had been very cold, now seemed to the patient especially so. After a few weeks, the symptoms disappeared without any special treatment. In the other case, hæmorrhagic vesicles formed from time to time in the mouth, and burst spontaneously. The author considers an abnormal condition of the vaso-motor centres to be the cause of both symptoms. In the second case, examination of the semen proved the absence of seminal corpuscles, which had already been wanting in the first stage of the disease. Of this also Buch considers the cause to be an affection of the vaso-motor centres. On the other hand, the patellar tendon-reflex was slow in disappearing in this case. In the first case, pain and increased reflexes appeared simultaneously. The time of the reflex action evidently depended upon the intensity of the irritation; the greater this was, the greater was also the extent of the response. Very interesting phenomena were also, in the first case, the decrease of faradic sensibility in limited spots; and in both cases the want of relation between mechanical and faradic irritability.

13. *Leyden on Chronic Cervical Myelitis.*—The patient in this case (*Zeitschrift für Klin. Med.*, Band ii, p. 455), a man, aged 56, had suffered for years from pain in his lower limbs, when rapidly, in the course of two months, there appeared pain, paralysis, and rigidity, first in the left, then in the right arm, with a more marked loss of power in the lower limbs. Two months later, first the left, then the right arm began to diminish in volume. During the next four years, without any particular disturbance of sensation, all four extremities became affected with rigidity, paralysis, and secondary muscular atrophy. Ultimately the disease diagnosed as cervical myelitis attacked the medulla oblongata; and disturbance of articulation and respiration was followed by death. There had been no bed-sores, and the functions of the bladder had never been to any extent affected. On *post mortem* examination, the cervical enlargement of the cord was found flattened, especially on its posterior aspect, where the pia mater was thickened and infiltrated. The posterior columns and posterior parts of the lateral columns were sclerotic, the grey matter was thin and brittle, the ganglion-cells shrunken and sclerotic. In the thoracic part of the cord, and in a less degree in the lumbar part, the same changes were present. The anterior part of the cord was unaffected. Professor Leyden considers the case to be that named by Charcot amyotrophic lateral sclerosis, the affection of the posterior columns and posterior parts of the lateral columns not being of the nature of a 'system-disease'. He says he has met with only one authenticated case of Charcot's primary lateral sclerosis, most so-called cases being progressive paralysis of the medulla oblongata with muscular atrophy, a primary degeneration of the motor tracts, with atrophy of the ganglion-cells, answering to Charcot's amyotrophic lateral sclerosis.

JAMES ANDERSON, M.D.

SURGERY.

RECENT PAPERS.

1. ATHERTON.—Death from Chloroform Inhalation Prevented by Opening the Larynx. (*Canada Lancet*, p. 301.)
2. VON BERGMANN, E.—The Treatment of Compound Fractures. (*Aertz. Intell.*, No. 37, 1880.)
3. MICHAEL, J. E.—On Circumcision. (*Maryland Med. Jour.*)
4. MOSTER.—On the Dangers of Peritoneal Transfusion. (*Deutsch Archiv für Klin. Med.*, vol. xxviii.)
5. BRAUN.—On Radical Cure of Hernia. (*Berl. Klin. Woch.*, Nos. 4 and 5, 1881.)
6. GUTERBOCK. P.—Drainage in the Treatment of of Hydrocele by Incision. (*Arch. für Klin. Chir.*, Band xxvi.)
7. GOTTSTEIN.—The Different Forms of Rhinitis; and Treatment by Plugging. (*Berl. Klin. Woch.*, No. 4, 1881.)
8. JARDIN.—Electrolytic Urethrotomy. (*Moniteur de la Policlinique*, March 20, 1881; quoted in *New York Med. Record.*)
9. DUBRUEIL.—On Intradeltoid Operation. (*Gaz. Méd. de Paris*, Nos. 11 and 13, 1881.)
10. FENGER.—The Surgical Treatment of Cavity in the Lungs.
11. PAUL, CONSTANTIN.—The Vaccination of Erectile Tumours. (*Revue de Thérap., Méd., Chir.*)
12. TROIZKI, J.—The Treatment of Burns by Bicarbonate of Soda. (*Wratsch*, No. 4, 1881; and *St. Petersburg Med. Woch.*, No. 19, 1881.)
13. LISTER.—On the Radical Cure of Hydrocele by the German ('Schnitt') method. (*Brit. Med. Jour.*, June 25, 1881.)

1. *Atherton on a Case in which Death from Chloroform was Prevented by Opening the Larynx.*—The following interesting case, in which death from chloroform seems to have been prevented by opening the larynx, is reported by Dr. Atherton in the *Canada Lancet*, p. 301. A man, aged 39, had inhaled chloroform for about half an hour for the

removal of a cyst from the eyebrow. The towel was removed, and the patient continued breathing a minute or two, when suddenly it stopped; and, in spite of pulling forward of the tongue and lower jaw, etc., and attempts at artificial respiration, nothing was got from him but one or two gasps two or three minutes after breathing stopped. For perhaps ten minutes, these efforts were continued. Then, the face becoming livid, the trachea was opened. Immediately on entering the trachea, air whistled through the opening, and respiration, with little or no interruption, was established. [The writer thinks it strange that the stoppage should have occurred after the removal of the chloroform. The reporter believes the explanation of it is that whilst the muscles supporting the larynx were relaxed, and the aryteno-epiglottidean folds nearly approximated, some liquid eructated from the stomach, and partially closed the larynx, making it valvular, and allowing air to pass outward and not inwards. This condition is often described as a falling back of the tongue. Drawing the tongue forward is, however, not always an efficient remedy, especially if forcible expiration, natural and artificial, have been made. In such cases, almost all the air has been forced out of the chest, and no more can enter. Sometimes the way is opened by forcibly pulling up the chin as far as possible away from the sternum. Howard's method of artificial respiration, by letting the head fall back over the edge of a couch, acts in the same way; but it appears that sometimes all these methods fail. Perhaps, even then, in the agony of death, a violent spasmodic action of the accessory inspiratory muscles may take place; these muscles include the dilators of the glottis, and those which connect the hyoid bone with the jaw, and if the lower jaw be sufficiently elevated, the air-passage may be opened. But we should not wait for this spasmodic gasp too long; and the reporter thinks the rule should be not to operate so long as the radial pulse is distinctly felt; but if this fail, to open the larynx at once.—*Rep.*] J. T. Clover.

2. *Bergmann on the Treatment of Compound Fracture.*—In a contribution to the *Aertz. Intell.-Blatt*, No. 37, 1880, of which an abstract is given in the *Wien. Med. Woch.*, No. 10, 1881, Prof. E. von Bergmann states that, in his treatment of penetrating fracture, he deviates from the rules that have been laid down by Volkmann for the management of open fractures in general. Penetrating fracture, by which is meant that form of fracture in which the skin is perforated at one small spot only by the sharp extremity of a fragment of bone, was to be distinguished from open fracture, even before the time of strict antiseptic dressing of wounds; since in the former injury the prognosis has always been far more favourable than that of the latter, in consequence of the smaller size of the wound, and of the less extensive contusion of the soft parts. In dealing with such cases, even when brought to him before the commencement of traumatic local reaction, Dr. von Bergmann does not dilate the wound and endeavour to establish primary disinfection of the injured structures. He restricts his action to careful cleansing, by solution of carbolic acid, of the surface of the injured limb, and to washing out the small wound and removing blood-clot. The whole of the limb is then enclosed in salicylic wadding, compressed by an elastic bandage, and finally fixed in a plaster-of-Paris splint. In all of eight cases thus treated, the author obtained good results; although in half of these instances the bone had protruded through the wound, and could not be reduced without some difficulty. In some of the cases there was much laceration of the soft parts, with swelling of the limb and considerable extravasation. In cases of compound fracture with large and gaping wound, the author follows Volkmann's practice of attempting primary disinfection; but this he does with great care, as he does not consider that this practice is absolutely free from bad results. This is indicated by those cases in which amputation has to be performed in consequence of phlegmon about the seat of fracture, which cases, even when terminating favourably, prove at least failure of the antiseptic treatment. The author has, moreover, observed one case of fatal septicæmia after such treatment of compound fracture. He is convinced that thorough disinfection cannot be established without risk; and for this reason he thinks that, in the treatment of penetrating fracture, it is well to retain the advantage of having but a small wound to deal with. Much importance is attached in such cases to compression of the limb by elastic bandaging, which, as it is applied over wadding, is not likely to do harm. The absorption of extravasated blood is thus much accelerated, and the danger of decomposition much diminished. The most important advantage of elastic compression in cases of compound fracture consists, according to the author, in its favouring the reunion of detached fragments of bone. That such reunion does take place, he has proved both by pathological specimens from man and by experiments on animals. W. Johnson Smith.

3. *Michael on Circumcision.*—Dr. J. Edwin Michael writes in the *Maryland Med. Jour.*: 'My method, which I learned in Vienna about eight years ago, and have since modified in some trivial particulars, has the advantages of being neat and cleanly, and avoiding the mistakes which result from traction. It is as follows. Having covered the anterior portion of the penis with a towel, I grasp it with my hand, and, being careful to allow no slipping between prepuce and glans, gradually increase the pressure until it has acquired considerable force. Then a tight band, elastic or not, is placed round the organ as close as possible to my hand. When my hand is removed I have the natural relation of the parts undisturbed, and the penis free from blood. The first step of the operation is to pass a director round between glans and prepuce, to find adhesions and remove them if any exist. The prepuce is then split up to the corona with a bistoury on a director, and afterwards the two lateral halves are trimmed off according to taste with scissors. The relation of the parts being preserved, and no traction being necessary, we can in this way see exactly what we are doing. The absence of blood also adds greatly to the neatness of the operation. After all the cutting has been done it is usually easy to find the orifice of any artery big enough to bleed, and it can be twisted or ligated. The edges of mucous membrane and skin are thus neatly stitched together with fine silk or wire, and sometimes the line of incision is carefully painted with collodion. If any ulcers be present, they are well treated with fuming nitric acid. A layer of wet lint or cotton is then placed round the part, and the whole included with a bandage firmly applied. The last step is to remove the constricting band. In twenty-four hours this pressure-bandage is removed, and the wound treated on general principles. This plan has been followed by such universally satisfactory results that I have felt justified in bringing it forward, not, of course, as anything original, but as

offering what I consider useful modifications of the usual operation of circumcision.'

4. *Mosler on the Dangers of Peritoneal Transfusion.*—Professor Mosler (*Deutsch. Archiv für Klin. Med.*, vol. xxviii) refers to the successful cases of Ponfick with injection of defibrinated blood into the abdomen (already recorded in the London Medical Record, vol. viii, p. 12), and to the observations which we have also recorded of Golgi and Bizzozero (*ibid.*), indicating the excellent effect of such injections in increasing the richness of the blood, as tested by observations on the increase of blood-corpuscles and hæmoglobin. Mosler assumes as an indication for transfusion the leukæmic quality of the blood; and the observations of himself and others on the effect of transfusion in leukæmia indicate that it should be done repeatedly in similar cases. It could not as yet be repeated often enough, on account of the dangers and difficulties of transfusion into the vessels. It being reported by Ponfick and Bizzozero that peritoneal transfusion presented greater advantages, the author resolved to try it on his patients, and especially to study the influence of repeated transfusion in the same patient. The first patient who appeared adapted for peritoneal transfusion was a man, aged 27, who had had sixteen parenchymatous injections of Fowler's solution of arsenic into a chronic tumour of the spleen without any symptoms of irritation of the peritoneum. Peritoneal transfusion appeared to be indicated by the anæmia, which had set in in a very high degree; besides, it was of especial interest to be able to state whether the splenic tumour, which had considerably diminished after the injections of Fowler's solution, would show a yet greater diminution. After repeated peritoneal transfusion, microscopic examination of the blood showed, besides a diminution of the red corpuscles, a large number of microcytes. The origin of the tumour was referred to intermittent fever and syphilis. On Dec. 8, 1880, 40 centigrammes of defibrinated blood were slowly injected, by means of a well disinfected injecting apparatus, through a puncture made in the left side of the abdominal wall. On the place of puncture, a carbolised compress was laid, fastened with a gauze bandage; and above this a bag of ice was placed. In the morning and evening the patient received a dose of 15 milligrammes (nearly a fourth of a grain) of pure opium. He complained of pains in the place of puncture, both during the operation and for some time afterwards. The temperature in the evening was 38.4 deg. Cent. (101 deg. Fahr.); the following morning 37.2 deg. Cent. (99 deg. Fahr.); no alteration could be noticed in the urine and blood. On Dec. 21, the peritoneal transfusion was repeated with the same apparatus. The place of puncture was the linea alba, about 7 centimètres below the navel. The transfusion, of 130 cubic centimètres of blood, was done gradually. The patient complained while the puncture was made, and also afterwards, of pains in the place of puncture, and upwards. Hourly measurements, after the transfusion, showed a moderate elevation of temperature. The pulse was 110 per minute. In the night the pains increased. On Dec. 21, in the morning, the temperature was 39.6 deg. Cent. (103.3 Fahr.), pulse 128; there were symptoms of peritoneal irritation. The abdomen was distended; he had considerable difficulty in breathing; the heart's action became irregular; and death occurred on the following night. The *post mortem* examination showed diffuse peritonitis, a tumour of the spleen, and a high degree of syphilis of the liver. In this case, observation shows that peritoneal transfusion cannot be recommended in all conditions of the vascular system. The author suspects that the repetition of the transfusion was the cause of the peritonitis; since neither were the instruments dirty, nor was there any injury to the intestine, nor abnormality of the injected blood. In this case an interval of twelve days occurred between the two operations, in which the patient showed no signs of peritonitis. He is inclined to think that the immediate cause of peritonitis here was an increased vulnerability of the peritoneum, due, probably, to the previous transfusion, as well as to the disease from which the patient suffered. He points out that peritoneal transfusion at short intervals must not be regarded as a harmless operation; and that it is probably contra-indicated in inflammatory and other diseases of the abdominal organs attended with a tendency to peritonitis.

5. *Braun on the Radical Cure of Hernia.*—H. Braun reports in the *Berl. Klin. Woch.*, for 1881, Nos. 4 and 5, the results of nineteen operations for the radical cure of hernia in the clinic of Professor Czerny at Heidelberg. Sixteen patients were operated on. There were sixteen cases of inguinal hernia, one of femoral hernia, two of omental hernia adiposa in the linea alba. Two patients died; one of pyæmia; the other, a child, of convulsions, which were in no way connected with the operation. Of the remaining fourteen patients, two adults with hernia in the linea alba, and three children, were entirely cured; in the rest, the hernia sooner or later returned; it, however, remained small, and could be retained by trusses. The author would limit the indications for the operation in adults to cases of incarcerated hernia, of very large or irreducible hernia, and to fæcal fistula of the hernial sac. In children, there is more permanent success, though the danger of the operation is also greater, since the dressings cannot be kept clean. Suppuration in the hernial sac appears, as regards the final result, rather unfavourable than otherwise.

6. *Güterbock on Drainage in the Treatment of Hydrocele by Incision.*—P. Güterbock (*Arch. für Klin. Chir.*, Band xxvi) recommends that, in cases of the antiseptic treatment of hydrocele by incision, drainage should be made from a counter-opening in the inferior posterior circumference of the scrotum, so that the original incision in the anterior superior portion of integument may be completely closed with sutures.

7. *Gottstein on the Different forms of Rhinitis and their Treatment by Plugging.*—Gottstein (*Berl. Klin. Woch.*, 1881, No. 4) recommends plugging of the nostrils in atrophic rhinitis, in accordance with his directions. In the hypertrophic form of the disease, plugging is useless. In deficiences of the septum, it is attended by a good symptomatic result. The author relates a case of a deficiency as large as a shilling, resulting from the hypertrophic inflammation, or perichondritis, and caries respectively of the nasal cartilage in which repeated examinations gave no indications of syphilis. The author does not think much of medicated plugs.

8. *Jardin on Electrolytic Urethrotomy.*—In 1867, Mallez and Tripier first proposed a new method of obviating the contractions from strictures, after operating by the use of electrolysis. But the apparatus which they had devised was not applicable to all cases, the urethral sound not being supplied with a conductor. Thus the electrolytic action could not be limited to one particular point. Dr. Jardin has

recently improved and, as he thinks, perfected the older apparatus. The new instrument consists of two parts. One (*Moniteur de la Policlinique*, March 20th, 1881; quoted in *New York Med. Rec.*) called the female branch is essentially a grooved urethral director, having a coating of gum, which extends on either side as far as the central groove. At one extremity this branch has a little plate attached to it, which allows of readily handling the instrument. The other end is gently curved and drawn out into a non-conducting portion. At this point there is also a little contrivance, serving to fix an exploring bougie. The male branch is made to slide along the groove of the female one. It consists of a metal rod, furnished at one end with a blade, having a dull edge, and hollowed out at its centre. The other end is constructed so as to afford attachment for an electrode. The operation is then performed as follows. The conducting bougie is first introduced into the urethral canal, then the female branch of the instrument is passed and pushed beyond the stricture. Now the male branch is introduced along the groove of the other until the blade comes into contact with the stricture. The instrument is connected with a strong battery, the negative pole being connected with the urethrotome, and the positive one applied by a suitable electrode over the thigh. At the latter point only a slightly smarting redness is produced, whereas the stricture is gradually severed. Bleeding never takes place, and after the operation the patient may resume his occupation. Micturition is immediately accomplished with ease. This apparatus has been tried in fourteen cases by its inventor, and has given entire satisfaction. The following advantages are claimed for it. The operation is easy of performance, and not painful. Hæmorrhage never accompanies it. A febrile movement is not set up by it, there being no violence, and only the formation of an eschar. *Sondes à demeure* are not necessary, and the patient can at once pass his urine after the operation. The patient can also immediately continue his work after completion of the electrolysis. Finally, the danger of remote complications is entirely overcome by this method. The instrument was made by M. Ch. Dubois, 31, rue Saint-Andre-des-Arts, Paris.

9. *Dubrueil on Intradeltoid Amputation.*—The author (*Gaz. Méd. de Paris*, 1881, Nos. 11 and 13), following the treatment of Grynfelt and Richet, and the directions of some Prussian observers, recommends the amputation of the upper arm to be performed as much as possible within the region of the deltoid muscle, and that this latter should be preserved by the formation of flaps, in order to enable the patient to raise the stump. In a historical essay, he defends this high amputation of the upper arm (known as intradeltoid amputation), in opposition to the view of the elder Larrey, who, favouring exarticulation of the upper arm, declared leaving a short stump of it to be useless.

10. *Fenger on the Surgical Treatment of Cavity in the Lungs.*—On November 26th, 1880, Dr. Fenger performed an operation at the Cook County Hospital, which, on account of its rarity and importance, deserves extended notice. The patient, an Italian, male, had a large gangrenous cavity in the right lung, extending from the second to the fifth rib and from the sternum to the posterior axillary line. An extremely offensive odour, like that of rotten eggs, surrounded the patient, and, in coughing, small quantities of greyish fetid matter were brought up. The cavernous respiration showed the cavity to be in the substance of the lung. No empyema was present. Dr. Verity withdrew, by means of a hypodermic syringe, a thin, greyish, fetid fluid from between the third and fourth ribs. It was agreed by the medical men in attendance to attempt to save the patient's life by an operation. Consequently, the patient having been anæsthetised, Dr. Fenger made a large transverse incision between the third and fourth ribs, and one and a-half inches to the right of the sternum, dissecting carefully through the overlying soft tissues, down towards the pleura. When the intercostal muscles were laid bare, an aspirator needle was introduced to ascertain whether or not the subjacent lung was adherent. As the needle did not oscillate conformably with the respiratory movements, he concluded that there was no fear of opening into the pleural cavity in this place, and consequently the knife was introduced into the cavity, giving means of escape to a quantity of very fetid matter. A counter opening was made at the posterior border of the axilla, and, after the evacuation of a pint and a half of fetid matter, the cavity was washed out with a two and a half per cent. solution of carbolic acid. A subsequent cough caused a coherent, yellowish-white, gelatinous mass to appear at the large anterior opening. This slipped back several times into the cavity, but was finally obtained by introducing a large forceps and the index finger into the cavity. A microscopical examination of this mass demonstrated it to be the cyst of a large echinococcus. A large drain-tube was now passed in at one opening and out at the other, and voluminous antiseptic dressing applied. The patient at the time of the report was in a fair way to recover, and, unless something untoward supervened, would leave the hospital in a few days.

11. *Paul on the Vaccination of Erectile Tumours.*—Dr. Constantin Paul, at a meeting of the Medical Society of Paris, May 1881 (*Revue de Therap., Med. Chirurg.*), in discussing the vaccination of erectile tumours, observed that it is the custom to attack these tumours by means of isolated spots of vaccination, and that cicatrisation is therefore not so complete as it is desired. By a modification of the procedure, however, Dr. Paul has, he says, obtained completely satisfactory cures in several cases, such as an erectile tumour of the neck, of the size of a five-franc piece, and other large nævi in various situations. He employs for this purpose calf lymph, because a great deal of lymph is required. He begins by covering the whole or a part of the tumour which has to be cured with a layer of vaccine; he then scratches the epidermis covering the tumour until the absorbent vessels of the dermis are exposed. He is in this way able to obtain a cicatrix of whatever extent he desires. When the crust (which is sometimes horrible to look upon) that covers the enormous pustule has fallen off, a cicatrix remains to the extent designed by scarification. The flow of blood may sometimes be abundant, and this has especially been the case in nævi of the lobule of the nose. Nevertheless, the cicatricial lines appeared subsequently as if drawn with a pencil. If the erectile tumour be very extensive, as happened in a tumour of the neck, it may be divided into parts, which may be dealt with one after the other, provided always that the whole operation be completed at the same sitting. The operator passes then from one portion of the tumour completely scarified to the neighbouring part, immediately that the blood is coagulated on the first. It is necessary to have at

one's disposal a great deal of vaccine, which may be obtained from the calf.

12. *Troizki on the Treatment of Burns by Bicarbonate of Soda.*—J. Troizki adds his testimony to that already published as to the value of solution of bicarbonate of soda as a dressing for burns (*Wratsch.*, 1881, No. 4; and *St. Petersburg Med. Woch.*, 1881, No. 19). He says that during the previous year he noticed twenty-five cases of burns, mostly of a severe nature. Sixteen of them were received in a fire in a village, during a strong wind, when the inhabitants, in order to save their property, were obliged to work in the flames. In all these twenty-five cases bicarbonate of soda was exclusively applied. The result of this treatment was so favourable, that the author considers himself justified in pronouncing this remedy the best and most efficient in burns of all kinds and degrees. Even in extensive burns of the second and third degrees, the pain was soon alleviated by the application of compresses soaked in a solution of bicarbonate of soda; and the wounds soon healed, leaving but few scars, and no impairment of the functions of the affected parts. No evil results from this extensive application of bicarbonate of soda, which might suggest the reception of carbonic acid into the blood, were noticed. Of the ten cases of which a detailed account is given by the author, one rather serious case may be related, in which the burns had spread over half the body. The whole face was stripped of epidermis, the hair was singed off, and the front of the neck, chest, and abdomen, and the dorsum of the foot, presented burns of the second degree; burns of the third degree were also found on the right mammary gland and on the right forearm, all the muscles of which were exposed as if prepared by dissection. A solution of the bicarbonate of soda was applied to these burns with a most conspicuous success: the patient felt relieved, and a cure was effected in four weeks; but the healing of the burns on the right breast and on the forearm lasted two months. The scars which were left were insignificant, and the mobility of the fingers was nearly normal. As regards the application of bicarbonate of soda in burns, the author distinguishes three methods. 1. Powdered bicarbonate of soda is strewn over the burned parts. 2. Linen rags, sprinkled with a solution of bicarbonate of soda (1 in 50) are laid on; as soon as these rags become dry, they are replaced by others or are moistened again in the solution. 3. Linen rags are applied in the same manner, but are kept constantly upon the burns, and moistened by pouring the solution on them. The first method suffices only for burns of the first degree. Change of the moistened rags is chiefly adapted for burns of the third degree, attended with much suppuration. In exchanging the dry rags, the pus which has accumulated underneath them must be carefully washed off, that it may not be received into the blood; and then a fresh rag soaked with the solution must be placed upon the clean granulating surface. The third method is applied solely in burns of the second degree. Changing the compresses would in these cases only irritate the exposed surface, and, by causing a more copious suppuration, delay the healing process. The beneficent effect upon burns of the solution of bicarbonate of soda the author considers to be due to the anæsthetic, antiseptic, and disinfecting property, which the bicarbonate owes to the ready disengagement of carbonic acid from it. Herr Troizki has also made experiments with other antiseptic and disinfectant agents, but has come to the conclusion that these are inferior to the bicarbonate of soda in their effect upon burns. Besides, the application of some of these, as for instance of carbolic acid upon large surfaces, would be dangerous; on small surfaces they very thoroughly disinfect the secretions of wounds; but these disperse more slowly than by the use of soda, and the anæsthesia, so desirable for the patient, is not so complete as when soda is applied.

13. *Lister on the Radical Cure of Hydrocele by the German (Schnitt) Method.*—In the *Brit. Med. Jour.*, June 25th, 1881, three cases are reported in which Professor Lister resorted to this method. In one case, the injection of the sac with the Edinburgh tincture of iodine had already failed. The operation is thus performed. The parts are first shorn and purified, salicylic cream, to make assurance doubly sure, being used for the latter purpose. Two blunt straight needles are passed through the skin and the sac of the hydrocele, in order to retain the latter in position; a free incision is then made between the two needles, and the sac opened up; bleeding points are ligatured, the wall of the sac is stitched to the skin, and the wound left open; antiseptic precautions are observed. The carbolic gauze was found to be too irritating for the scrotal skin, giving rise to much pain, and, in one case, to some vesication. In the third case the new eucalyptus gauze was used, and was found to be equally effectual in preventing decomposition, and to be quite unirritating. Professor Lister, therefore, advises its use in operations about the scrotum. All the cases were successful, and the third patient experienced no pain at all.

DAWSON WILLIAMS, M.B.

DISEASES OF CHILDREN.

RECENT PAPERS.

1. TSCHAMER.—On the Contagium of Variola, Vaccinia, and Varicella, and their Relationship to each other. (*Archiv. für Kinder.*, vol. ii, part 3.)

2. FILATOR.—On the Etiology and Diagnosis of Acute Peritonitis of Children. (*Ibid.*)

3. TURIN.—On the Temperature of Tubercular Meningitis of Children. (*Jahr. für Kinder.*, vol. xvi, part i.)

4. RUSSOW.—The Influence on the Weight and Length of Children of Natural and Artificial Feeding. (*Ibid.*)

5. WORONICHIN.—Record of Continued Weighing of a Child during Dentition, from six months old to cutting of last milk-tooth. (*Ibid.*)

6. GOWERS.—On Paralytic Chorea. (*Brit. Med. Jour.*, April 23, 1881.)

7. SMITH, EUSTACE.—On Milk-Indigestion in Young Children. (*Ibid.*, June 4.)

8. SMITH, LEWIS.—The Treatment of Pleurisy in Children. (*New York Med. Record*, April 1881.)

9. BOWDITCH.—Relations between Growth and Disease. (Annual Meeting of American Medical Association.)

10. WHITE.—Infantile Eczema. (*Ibid.*)

11. GOODWILLIE.—Thumb Sucking. (*Ibid.*)

12. NUNN.—Treatment of Diphtheria. (*Ibid.*)

13. BRADFORD.—Clubfoot. (*Ibid.*)

14. BLAKE.—Disease of the Tympanum in Acute Exanthemata. (*Ibid.*)

15. JACOBI.—Progress in the Knowledge of the Acute Contagious Diseases and Infections. (*Ibid.*)

16. PARKER.—Remarks on the Curvatures of the Long Bones in Rickets. (*Med. Times and Gaz.*, April 2, 1881.)

17. ASHBY.—Notes on Typhoid in Children. (*Practitioner*, June 1881.)

18. LEE.—On Whooping-Cough. (*Lancet*, April 30 and May 7.)

CASES OF CHILDREN'S DISEASES IN HOSPITALS.

Two cases of Acute Arthritis of Infants. Mr. M. Baker. (*St. Bart.'s Hos. Reports*, 1880.)

Cases of Infantile Nervous Diseases. Dr. Gee. (*Ibid.*)

Acute Osteitis: Boy, aged 14 years: Septicæmia: Excision of Tibia: Recovery. Mr. Macnamara, Westminster Hospital. (*Brit. Med. Jour.*, April 2, 1881.)

Acute Osteitis: Pyæmia: Osteotomy: Death: Boy, aged 12 years. Mr. Mason, St. Thomas's Hospital. (*Ibid.*)

Hæmorrhagic Small-Pox: Recovery: Girl, aged 11 years: Unvaccinated. Dr. Gayton, Small-Pox Hospital, Homerton. (*Ibid.*, April 9.)

Gangrene of Left Leg in New-born Infant. Dr. Reed, Plymouth. (*Ibid.*, April 23.)

Passage of a Scarf-pin by a Child, 18 months old. Dr. Garner, Preston. (*Ibid.*)

Belladonna Poisoning: about four drachms of Extract Swallowed: Extreme Symptoms: Treatment by Emetics, Pilocarpine, Brandy: Rapid Recovery. Dr. Bond, University College Hospital. (*Ibid.*, April 23.)

Tetanus Neonatorum: aged 12 days: recovery. Dr. Welch. (*Ibid.*, April 30.)

Right Hemiplegia with Unilateral Anasarca of Trunk and Limbs and Hyperæsthesia: aged 5½ years: Post-Scarlatinal: Inequality of Temperature on two sides: Death: No *post-mortem* Examination. Dr. Treutler. (*Ibid.*, May 7.)

Strangulated Congenital Hernia: Operation: Recovery: aged 9 weeks. Mr. Cotterill, Royal Dispensary, Edinburgh. (*Ibid.*, May 21.)

Case of Croup, aged 4 years: Treated by passing Catheter into Trachea by the Mouth: Recovery. Dr. Paton, Rockferry. (*Ibid.*, May 21.)

Gangrene of Right Leg, Scrotum, and Penis: aged 3 weeks: fatal. Mr. Logan, Bristol. (*Ibid.*)

Case of Mumps followed by Meningitis and subsequently Orchitis: aged 16 years: Recovery. Mr. Hall, Lancaster. (*Ibid.*, June 18.)

Double Renal Calculi: Girl, aged 7 years: Death: Calices of both Kidneys distended with Calculi: Case simulating Congenital Heart Disease: Death: aged 2½ years: Heart healthy. Dr. Semple, North Eastern Hospital for Children. (*Med. Press and Cir.*, April 27.)

Sudden Dyspnœa: Cause unknown; Tracheotomy: Death: aged 19 months. Mr. Parker, East London Hospital for Children. (*Med. Times and Gaz.*, April 16, 1881.)

Scarlet Fever: Empyema: Aspiration: Recovery. Mr. Parker. (*Ibid.*)

Traumatic Cerebro-Spinal Meningitis: Death: aged 22 months. Mr. Parker. (*Ibid.*, April 23.)

Ectopian Vesicæ: Plastic Operation: Death: 5 weeks. Mr. Parker. (*Ibid.*, May 14.)

Calculus Vesicæ in girl aged 5 years: Extraction by Rapid Dilatation of Urethra. (*Ibid.*)

Scarlatinal Nephritis (?) Meningitis: Recovery. Dr. Barlow, London Hospital. (*Ibid.*, June 11.)

Severe cases of Pleurisy with Effusion in Children: Paracentesis: Quick Recoveries. Mr. Cæsar, Victoria Dock Dispensary. (*Lancet*, April 2.)

Vesical Calculus: Lateral Lithotomy: Subsequent Discharge of Pus from Umbilicus: Recovery. Mr. C. Puzey, Liverpool Northern Hospital. (*Ibid.*)

Bromide Eruption: aged 14 months. Dr. Cavafy, St. George's Hospital. (*Ibid.*, May 7.)

Rabies in a Deaf Mute: aged 6 years: Onset of Symptoms 5 months after Bite: Death. Mr. Taylor, New Zealand. (*Ibid.*, June 18.)

Lithotomy in a Child: aged 2 years 8 months: Calculus of Uric Acid and Phosphates as large as a chesnut: Recovery. Mr. Reckitt. (*Ibid.*, Jan. 4.)

CASES AND SPECIMENS OF CHILDREN'S DISEASES EXHIBITED AT SOCIETIES.

Pathological Society of London.—April 5, Dermoid Tumour of Soft Palate: aged 3 years: tumour two inches long, structure resembled skin, with hair and glands, fat and cartilage. Dr. Hale White.—April 19, Cirrhosis of Liver in boy aged 10 years: morning sickness, anorexia and epistaxis: no history of spirit drinking: no evidence of syphilis. Dr. S. Taylor.—May 3, Sarcoma of Kidney, aged 22 months: no other organ affected. Dr. Abercrombie. — Intussusception of Ileum into Colon: ulceration of cœcum: death from peritonitis. Dr. Turner. —Sarcoma of Capsule of Kidney: nearly filling abdomen: of two months' growth: fatal at 4 years.

Clinical Society.—April 8, 1881, Arterial Hæmatoma of right forearm in a boy aged 14 years, subsequent to rheumatic fever, and apparently due to embolic arteritis and perforation. Mr. Rushton Parker. Meningocele: 4½ months. Dr. Steavenson.

Ophthalmological Society of Great Britain.—March 31, Orbital Tumour and Double Optic Neuritis: boy, aged 12 years. Mr. Streatfeild.—April 7, Disease in Region of Yellow Spot of both Eyes: aged 1 year. Mr. Waren Tay.

Manchester Medical Society.—April 26, Round-Celled Sarcoma of Thyroid Body; aged 9 years: 3 months' duration. Mr. Southam.—Tumour of Cerebellum, Tubercular: girl, aged 12 years. Dr. Mann.

Aberdeen Branch of British Medical Association.—May 11, Case of Rupture of Tympanum, with Facial Paralysis: aged 7 years. Dr. M. Booth.

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3. *Turin on the Temperature of Tubercular Meningitis in Children.*—Dr. Turin, after referring to the want of accurate information concerning the temperature in tubercular meningitis, proceeds from an analysis of forty-one cases to the following conclusions. 1st. The disease is always accompanied by high temperature in the prodromal or one or two of the subsequent stages, but rarely throughout the whole course of the disease. 2nd. In a few cases the disease begins with a sudden elevation of temperature, like the onset of an acute disease. 3rd. The thermometric results are extremely variable, so that a typical curve cannot be drawn. 4th. In cases of pure tubercular meningitis, the temperature seldom rises above 39 deg. Cent. (102 deg. Fahr.), and mostly varies between 38 deg. and 39 deg., but may fall several degrees below normal. 5th. The most frequent type is remittent, with the usual daily fluctuations. The variations within twenty-four hours are normal or greater than normal, often of a very irregular character, more or less sudden, rises and falls in each stage and at different times of the day. 6th. When the meningitis is the sequence of some febrile affection, the temperature is higher than in other cases, but otherwise runs a similar course. 7th. In cases of acute miliary tuberculosis the febrile elevations are greater and more variable.

6. *Gowers on Paralytic Chorea.*—Five cases in children of ages varying from 7 to 14 years, three of whom were girls, formed the basis of a paper read by Dr. Gowers at last year's meeting of the British Medical Association. They illustrate that form of chorea in which the muscular weakness is the prominent symptom, the twitching, and incoordination of voluntary movement being slight. In regard to such cases, Dr. Gowers remarks, rarely slight clonic spasm occurs in the affected arm at first, and subsequently passes off. The loss of power may be very great, as it may be much less than the loss of use of the limb

would suggest. In these cases there is inaction rather than paralysis; usually one arm only is affected, and there is no paralysis of face, tongue, or leg. Both arms may be affected, but one is always the weaker. On careful watching, clonic twitching is to be observed, though often very slight. The course of such cases is tedious, but they have not been seen to pass into severe general chorea. The reported cases all recovered under the use of liq. strychniæ.

7. *Smith on Milk Indigestion in Young Children.*—Dr. Eustace Smith contributes to the *British Medical Journal* of June 4th, a very practical paper on indigestion in young children, associated with milk food. Though by far the most frequent in infants fed on cow's milk, it is not unknown in sucklings. The morbid condition is primarily due to some disturbance in the digestive organs, or some defect in the quality of the milk. In either case there takes place an acid fermentation of the milk, which either establishes or intensifies any existing gastric catarrh, the symptoms of which are frequently severe or even fatal. Not seldom a perfectly pure fresh milk, given in suitable quantities, and with all possible precautions to make it digestible, is found to disagree in the same way as undiluted cow's milk given in quantities too large or too frequent. In such cases the child begins very quickly to waste, and to show all the signs of defective nutrition. The general symptoms of the catarrh may be divided into three classes, according as to whether the prominent feature be diarrhœa, vomiting, or constipation. The rational treatment for such cases obviously consists in attempting to prevent the acid fermentation, by diluting the milk with barley-water or gelatine, so that the casein may be forced to coagulate in a multitude of little clots instead of in solid dense lumps; or to partially neutralise the gastric juice by lime-water. But in the very frequent cases where this fails, and the indigestion is evidently due to an inability to digest milk in any form, it becomes necessary to temporarily substitute some other aliment, and especially so when the milk has been supplemented with starchy or saccharine matters, themselves the cause of an acid fermentation. Dr. Smith recommends in such cases to replace the fermentable matter by weak veal or chicken broth in equal proportions; cream and whey, a dessert spoonful to 4 ounces; yolk of egg beaten up with whey or veal broth, and Mellin's food for infants dissolved in barley-water, or in equal parts of this and whey. In cases where the vomiting is severe, half-drop doses of liquor arsenicalis with a few grains of bicarbonate of soda in some aromatic water, is the best sedative, and it is usually desirable to commence with a full dose of castor-oil to remove the irritating substances. After a few days of such treatment, the power of digesting milk usually returns, but at first it should be given sparingly, freely diluted with barley-water, and only once or twice in the day.

8. *Smith on the Treatment of Pleurisy in Children.*—The treatment of pleurisy in children was the subject of a communication by Dr. Lewis Smith to the obstetric section of the New York Academy of Medicine, from which we abstract the following. During the stage preceding effusion, the application of one or two leeches may be beneficial, except when the disease is secondary to acute specific fevers. Poultices made very wet, of one part of mustard to 16 of linseed, and changed every twelve hours; or in infants, friction with camphorated oil, are most serviceable; blistering should not be employed. Half to one-drop doses of tincture of aconite may be given; or, preferably, one to two-drop doses of tincture of digitalis every three hours, and opium to relieve the pain and cough. During the stage of effusion, diuretics and tonics are beneficial. Infusion of digitalis with acetate of potash, is very serviceable. A relaxed condition of the bowels favours absorption of serous effusion, diaphoretics do not aid much in the removal of the fluid. Pilocarpin produces a depressing effect, and the propriety of using blisters in this stage is very doubtful. Dr. Smith formulates the indications for thoracentesis as follows. Oppressed breathing, due to effusion; a flat percussion note over the entire affected side, with displacement of the heart, even if there be no dyspnœa, for this may occur suddenly; no material decrease in the effusion after weeks of treatment; moderate effusion with disease of the opposite lung, or of the lung of the affected side; extension of the inflammation to the pericardium; the existence of cardiac valvular lesion; empyema. The operation should be performed in the eighth intercostal space, on a line perpendicular with the angle of the scapula. The cannula should be introduced to the depth of one inch, and the admission of air to the pleural cavity should be carefully avoided. Washing out the cavity is injurious rather than beneficial, except when the pus is offensive, the object being to empty the cavity and approximate the pleural surfaces. Dr. Smith thinks there will be a reaction against the removal of a portion of the ribs in cases of empyema.

10. *White on Infantile Eczema, and on Diseases of Children, at the Annual Meeting of the American Medical Association.*—Dr. White of Boston presented a paper entitled 'Some of the Causes of Infantile Eczema, and the importance of mechanical restraint in its treatment'. From an experience of 5,000 cases, of which 1,770 occurred in children of 10 years of age and under, and 569 of these in the first year of life, the author considered that the cause was ascertainable in but a very small proportion of the number, and that, as far as his experience went, eczema affected all classes of society alike, occurred at all seasons of the year, came in children of all degrees of health, in the perfectly sound as frequently as in the feeble; that it had no necessary connection with any other diseases of childhood; that it showed itself in an equal proportion in bottle babies and those reared at the breast, and was independent of diet, and that there was no more necessity for a supposed sympathy with, or dependence upon the state of the blood, or the condition of some other organ, when the skin is affected with eczema, than when the lung, kidney, etc., is affected. He further considered that a system of restraint by straight-jacket, to prevent scratching, was sufficient to cure this disease. Considerable dissent from these views was expressed in the discussion that followed by Dr. Bulkley of New York. Dr. Ulrich of Pennsylvania, who regarded the straight-jacket as a species of torture, considered that Dr. White laid far too great stress on local causes of eczema, and ignored entirely the influence of internal general dietary and hygienic causes, which, if not recognised and managed, results in the local treatment being imperfect and uncertain. Dr. Bulkley did not believe the subjects of infantile eczema were really in perfect health; and it was rare for the itching not to be relieved by an ointment of tar, oxide of zinc, and rose-water. W. H. Allchin, M.B.

REVIEWS.

On Anchylosis, and the Treatment for the Removal of Deformity and the Restoration of Mobility in various Joints. By Bernard E. Brodhurst, F.R.C.S., Surgeon to the Royal Orthopædic Hospital. Fourth Edition, Revised and Enlarged, with Engravings. London: J. and A. Churchill. 1881.

The treatment of ankylosis by forcible flexion was advocated by Mr. Brodhurst twenty-four years ago; and he publishes a fourth edition of his work because he desires to confirm all that he has previously said upon the subject, and to express his increased confidence in this plan of operation.

Flexion of the stiff joint and not *extension* is the chief point urged by this author; and manual operation is advocated as being a far safer and more effectual mode of procedure than movement by means of mechanical apparatus.

In dealing with the *causes* of false ankylosis 'gonorrhœal rheumatism' is especially referred to; but, inasmuch as the author considers that this affection is not necessarily the result of gonorrhœa, the name is considered inappropriate; yet this species of ankylosis he states 'is an affection which is always preceded by urethral irritation and, for the most part, by a specific urethral discharge.'.....'No form of inflammation induces false ankylosis so frequently as this.'

As to *diagnosis*, Mr. Brodhurst strongly urges the value of anæsthetics; and, when examinations are made without their help, he advises gentleness in manipulation, because rough handling is likely to excite muscular action, which will more or less limit the movement of the joint. In this chapter (upon diagnosis) more, perhaps, might have been said upon the various indications of pain as a symptom of active disease, or of the presence of adhesions attached to sensitive parts.

The chief portion of the book is devoted to *treatment*, and this is doubtless that portion to which the author attaches most importance. Mr. Brodhurst is a great advocate for tenotomy, and he employs this means of treatment when dealing with fibrous ankylosis in which there are any 'rigid muscles'. He also divides cicatrices (subcutaneously) when they appear to interfere with the restoration of the joint to its proper sphere of action. 'It is better,' he says, 'to proceed at once to the subcutaneous section, rather than to prolong the treatment by extension unnecessarily; for unless the adhesions are recent, simple extension is seldom of itself, and uncombined with subcutaneous sections, sufficient to remove the contracted condition of a limb.' The limb is then to be well supported by an apparatus, and extension to be made slowly.

There are, however, many cases in which such treatment will not suffice to restore mobility to the joint; in which, in fact, the firm condition of the ankylosis contraindicates any attempt at gradual extension. It is then that forcible *flexion* is to be adopted. Great care is to be taken to discover the exact condition of the joint, so as to avoid any interference until active disease has entirely ceased. The determination of this period is a matter of great importance, and one which might, perhaps, have been enlarged upon. Some surgeons consider that several months ought to be allowed to elapse after active disease has ceased, before any attempts at reduction are made; and perhaps Mr. Brodhurst, in taking care that the disease had 'entirely ceased', would not operate sooner than other cautious surgeons; but this is not thoroughly expressed.

If the case is suitable for operation, the following conditions are, the author states, to be observed. 1. The patient must be completely under the influence of an anæsthetic. 2. Dense cicatrices, fasciæ, and tendons are to be subcutaneously divided, and the punctures allowed to heal before the limb is flexed. 3. Moderate force alone is to be used to rupture the adhesions. 4. *Flexion*, and not extension, is to be made. 5. After operation, the limb is to be retained fixed in the deformed position until all tenderness has ceased.

The bad results that have followed the operations of Louvrier, Dieffenbach, and others, have arisen, either from their using powerful instruments, or from their attempting reduction without dividing tendons, etc., or because they have employed *extension*.

Attention should be paid to Mr. Brodhurst's advice that *moderate* force alone be employed; and we would remark that this moderation is very important when the patient is young, because epiphyses have been separated from their shafts in young subjects, and, as a result, amputation has been rendered necessary.

Mr. Brodhurst appears to have met with extraordinary success in the cases in which he has employed forcible flexion in fibrous ankylosis, as he states that with over 1000 cases no bad results have occurred.

In the chapter devoted to the treatment of osseous ankylosis, the author describes the operation of section of the neck of the femur, a proceeding first instituted by Barton, of Philadelphia, but which 'scarcely became a well recognised operation until Mr. Adams especially drew attention to the subject'. The operations of Barton and of Adams, are, however, different in this important respect, that a large incision is made in Barton's operation, while that of Adams is strictly *subcutaneous*.

E. Noble Smith.

Syphilis et Mariage. Leçons professées à l'hôpital Saint-Louis. Par Alfred Fournier. Paris: Masson. 1880.

Syphilis and Marriage. By Alfred Fournier. Translated by Alfred Lingard, M.R.C.S., with prefatory remarks by Jonathan Hutchinson, F.R.C.S. London: David Bogue. 1881.

The important question of syphilis, in relation to marriage, has been discussed from time to time by various authors, notably by Diday and Langlebert; but never in anything like the complete and systematic manner in which it is dealt with by M. Fournier in these lectures which have now been carefully translated by Mr. Lingard.

The book is divided into two parts; the first relating to syphilis contracted before marriage; the second dealing with the consequences of the disease during married life. In the first part the dangers attending marriage at an early period of syphilis are strikingly set forth, and numerous examples are related to show the disastrous results that may ensue under such circumstances, both with reference to the wife and to the children, as well as directly and indirectly to the patient himself. On the other hand, the author strongly combats the view that syphilis *per se* forms a permanent obstacle to marriage; and

a large number of cases are quoted to prove that a man who has suffered from syphilis may, nevertheless, marry without infecting his wife, and become the father of perfectly healthy children, provided that certain conditions have been fulfilled before the marriage is contracted. These conditions are briefly as follows: 1. Absence of actual syphilitic symptoms. 2. Advanced age of the diathesis. 3. A sufficiently lengthened period of immunity after the last specific manifestations. 4. A non-menacing character of the diathesis. 5. A sufficiently prolonged course of specific treatment.

These several conditions are considered at length, and the author is of opinion that no syphilitic person ought to think of marriage under a minimum period of three or four years devoted unremittingly to treatment. M. Fournier's rule, however, when consulted on this subject by a patient whose syphilis dates back only three or four years, however regularly he may have been treated, is to advise further delay and further treatment, unless the patient urge serious reasons for immediate marriage, in which case, if he fulfil all the other conditions just mentioned, he may be allowed to contract marriage. With regard to this part of the subject many will probably agree with Mr. Hutchinson in his prefatory remarks, when he says that he is 'scarcely prepared to go the full length, which M. Fournier suggests, in the direction of caution and of prohibition'. A three or four years' course of treatment is certainly not usually considered necessary—at least in this country—in ordinary cases of syphilis; though, of course, in some instances, even a much longer period may be required. No one can doubt, however, that strict rules in respect of marriage are necessary; and few will feel inclined to blame the author for keeping on the safe side, more especially if the lamentable frequency with which marriage is entered into by persons totally unfit as regards their health be considered.

In the second part of the work, the various ways in which syphilis may affect husband, wife, and children are fully discussed. The most appropriate prophylactic measures are first pointed out. Full instructions are also given for the management of pregnant women, and of the offspring, when syphilis has already been propagated, as well as for the prevention of further spread of the taint to wet-nurses, and others who may be brought in contact with the diseased individuals. Further, the line of conduct which, in M. Fournier's opinion, ought to be followed by the physician, with regard to the delicate questions that may arise in connection with the introduction of syphilis into a family, is also indicated. A long list of cases and other evidence bearing upon the numerous important points discussed in the preceding pages, completes a work full of valuable information, and one which fills an important gap in the literature of syphilis. The questions so ably handled by M. Fournier in these lectures, must constantly arise in the practice of every medical man, and from the clear and practical manner in which the subject is treated, the book cannot fail to be of assistance to all who study it attentively.

Arthur Cooper.

Supplement to Ziemssen's Cyclopædia of the Practice of Medicine. Edited by George L. Peabody, M.D. London: Sampson Low, Marston, Searle, and Rivington. 1881.

When books reach the size of nine large volumes, it is no light matter, either for editor or for reader, to contemplate the possibility of any such necessity as a speedy issue of a second edition. Some such thought, with its attendant sympathy, must have inspired the effort expressed in the supplement to Ziemssen's Cyclopædia, now before us. Thus, at any rate, it appears to the reader, who can only view a book of this kind in the light of a novel attempt to obviate a contingency painful to contemplate, or as a well-meaning courtesy between doctors of different nationalities. Though it strikes one as somewhat strange that a supplement to a work of the stamp of Ziemssen's Cyclopædia should have been issued apparently uncontrolled in any way by the supervision of the originator, or even of the editor, so far as we can find, of the English translation of the already completed issue, this volume is not without points which are worthy of commendation. But as a work—of art, shall we call it?—it may be doubted whether it will do much towards sustaining the reputation of its compilers or its editor. A book that from its very nature must contain such a smattering, even though it be intended to crown an incomplete structure, must so abound with evidences of its own incompleteness, must prove so demonstrative of the incompleteness of the original, even if, as we readily allow, the omissions which require a supplement are no more than those dependent upon the march of the times, that it will probably disappoint more than it will gratify. We fear this will be the verdict upon this volume.

All through it a sense is imparted of competition upon unequal terms with medical journals, indices of diseases, medical records, and such like periodicals, and what is done satisfactorily in the one case is very unsatisfactory in the other, because the objects of periodical and stationary literature are, or should be, different. The weekly journals, records, etc., are the stomach of the profession, but cyclopædias, at any rate, should contain nothing which is not thoroughly digested and ready for complete assimilation. Now, we do not think that this view of the dignity of a ten volume cyclopædia is at all acted up to in a supplement which aims at nothing more than keeping the original up to date. It is impossible to keep such a book up to date if what is meant by so doing is to make it contain a record of all the latest observations upon all subjects; and the inevitable result of any such attempt is to produce a big bibliography with a number of disjointed observations, which could hardly ever be in any sense complete when we consider how numerous are the workers, and how rapidly observations follow one another upon all subjects, and are furnished to the crucible of medical opinion. In the book before us we have much bibliography, and should have had more, but that the editor wisely decided to omit some, having a preference for text, which is, at any rate, more appetising, if not always more digestible in the end. And we have a collection of articles, containing the observations of some, the cases of others, in what appears to be a somewhat heterogeneous mixture. But enough of this vein. We have no intention of doing more than suggesting that the task which the editor set himself to do is more than any one could hope to do to the satisfaction of a large number of his readers. The book itself contains, of course, much that is valuable, much that is interesting, much that will ensure it plenty of consultation. We can scarcely particularise, where the range of embrace is so wide and varied, and where some subjects, having made greater advance than others, necessarily claim more attention and more space. But it may be re-

marked that, to judge from the small amount of matter devoted to it, the liver has had its day, and that investigators in this direction have of late rested from their labours. We find only a few pages on the operation of cholecystotomy, and a page or two on hypertrophic cirrhosis. The latter section illustrates well the weak point of such a book—that, in endeavouring to give a summary of recent observations, it, with the original, soon grows old, as the observations of Hamilton and Dreschfeld find no mention, and, indeed, many others we could name. But there are many interesting articles on zymotic disease, diseases of the larynx, lungs, heart, nervous system, and kidneys, which will well repay perusal. Of the merits of these our readers must judge for themselves.

JAMES F. GOODHART, M.D.

The Harrogate Waters, etc. By G. OLIVER, M.D. 12mo., pp. 224. London: K. K. Lewis. 1881.

Guide to Trefriw. By J. W. HAYWARD, M.D. 3rd Edition, 12mo., pp. 77. Liverpool and London. 1881.

THE first book on our list gives a clear history of the varied resources of Harrogate. It commences with a notice of the climate, and goes on to examine fully the different springs and their mineral constituents; it concludes with a well considered account of the therapeutic action of the waters.

Dr. Oliver also enters on a wider field, and compares the Harrogate waters with similar continental ones, following the good example shewn by Mr. Prestwich a few years ago in his examination of the mineral water discovered at St. Clement's, Oxford. Works like the present one, and that of Dr. Spender on Bath, will help much to raise the character of the literature of English Balneology. Having expressed this opinion of the value of Dr. Oliver's work, we proceed to offer a few criticisms on it.

It is only natural that the writer should perhaps overpraise the virtues of the climate and the waters of his own station. This is a defect almost inseparable from works of the class, but Dr. Oliver does not sin much in this respect. He is not satisfied with the very potent contents of his wells—salt, sulphur, and iron, as explaining the efficacy of Harrogate treatment, but is much inclined, as many writers at present are, to go in search of minute quantities of other substances—which have of late been discovered in the waters. For instance, he seems to regard small doses of Barium, which are only taken in conjunction with a large quantity of other salts, as distinctly modifying the action of the waters. He and Dr. Thorpe boast that no springs in this country or on the Continent contain so much of that 'potent agent' Barium. It does not seem to us to be a therapeutic question of much importance how much Barium the Harrogate waters contain; but we observe that the Grub Quelle of Recklinghausen in Germany contains 0.564 of Barium, calculated to correspond to 0.763 of Carbonate of Barium, in the 10,000 parts, which is probably quite as strong as anything at Harrogate.

Then, again, one of the Harrogate wells is declared to contain as much of Iodine-Bromic contents as the well at Challes. This is true in a general way—but on looking at Dr. Oliver's table, we find that as to the more active agent, Iodine, the Challes well contains about ten times as much as the Harrogate one. Dr. Oliver admits that the name of Kissingen given to one of the Harrogate springs is inappropriate. We wish that he had not repeated, over and over again, the misprint of 'Kissengen'; we could enumerate a good many similar misprints, as 'Baden (Swetz) Malkt-Bruomen,' 'Leibig,' etc. One misprint of the title of an old-English work on Harrogate is repeated twice, Spandarine for Spadacrene.

We should have been glad if Dr. Oliver had said a little more about the addition of Carbonic Acid to some of the Harrogate waters. There is at present quite a fashion in this matter, which may be carried too far; but, undoubtedly, disagreeable waters like those of Harrogate may be rendered more palatable by the addition of that gas. We learn that in Norway they have been making sea-water a not unpleasant drink for scrofulous children. It also appears, from a German journal, that the waters of Llandrindod, bottled and charged with Carbonic Acid by their spirited proprietor, now figure in the Frankfort Exhibition.

Dr. Oliver concludes with something of a sneer at the muddy mine-washes which have been dignified as mineral waters, alluding, we presume, to the water treated of in the second work of our heading.

In that work the most is made of Trefriw, of its natural scenery in a picturesque part of Wales, of its climate, of its fishing, and open air life.

The spring, issuing from old mines, is a very powerful alumino-chalybeate—indeed, there are two, a weaker and a stronger; but even the weaker one is so strong as to be poisonous in large doses. It is declared that the water is quite clear and colourless when it issues, although it soon decomposes. It is a water which would be much better drank diluted, than in tea-spoonful doses; but, unfortunately, the addition of water makes it muddy. Still, if used with care, a certain quantity of iron may be thus introduced into the system. But this class of very strong waters, like the abandoned well at Sandrock in the Isle of Wight, does not supply a convenient mode of administering iron.

J. MACPHERSON, M.D.

On Heart-Starvation. By J. MILNER FOTHERGILL, M.D. (Reprinted from the *Edin. Med. Jour.* 1881.)

WE cannot approve of the tone which pervades this *brochure* of Dr. Fothergill's. It would be a retrograde step if medical writers were to fall into the style which seems to commend itself to this prolific author. We strongly object to these sensational titles, and to the attempt to dress up well known clinical facts in strange and startling phraseology. Apart from the language in which they are disguised, there is not a fact mentioned in this essay which is not also a common-place to every experienced practitioner. And Dr. Fothergill must be aware that it is not usual, nor is it commendable, to publish such statements as the following. 'The Rev. M. S. had for seven preceding months been under the care of one of the most eminent members of the profession in town, without avail. . . . . So far he has made a most marvellous recovery since he has been under your (Dr. Fothergill's) treatment!'

Again, we are told that a 'Mr. A. consulted the late Dr. Murchison some three years ago, who then said there was nothing organically wrong with the heart'; but to Dr. Fothergill, 'the case seemed one of failure, from fatty degeneration of the heart-walls'; and we are further informed that 'the eminent medical men, under whom he had been before placing himself under my care, "lacked decision" in their measures'.

I. BURNEY YEO, M.D.

Refraction of the Eye. By A. STAMFORD MORTON, M.B., etc. London: H. K. Lewis. 1881.

THIS little book is well arranged, and bids fair to answer the purpose for which it is intended. As is seen by the preface, the author does not claim to add to the subject anything new. His object, which on the whole he fairly attains, is to put in a clear and precise manner the most modern methods of treating errors of refraction. The chapters on 'Keratoscopy' and on the formation of images, are really good, and constitute the most valuable portion of the work. W. A. BRAILEY, M.D.

The Detection of Colour-Blindness and Imperfect Eyesight; with Tables, etc. Arranged by CHAS. ROBERTS, F.R.C.S. London: David Bogue.

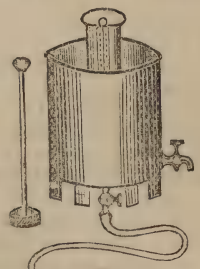
THIS little book gives much information in a small compass. It has, however, the imperfection attaining to its convenient size, for the methods and tables given are not very full. Dr. Daae's wools are correctly given, though for practical purposes it would be better for the Anthropometric Committee of the British Association for the Advancement of Science, for whom these tables are arranged, that their examiners should supplement, if not supersede, them by the wools of Holmgren. The method of using these is described.

As concerns the determination of the quality of the eyesight, by the test and directions given, we fear that many cases will be returned under the ambiguous and imperfectly explained heads of amblyopia and amaurosis. Indeed, the diagnosis of very many cases could not be made by their use. But, as far as it goes, the information given is correct and useful. W. A. BRAILEY, M.D.

NEW INVENTIONS.

DR. WHITESIDE HIME'S TRANSFUSER.

The apparatus figured below is one of Dr. Hime's



own device, and he believes that it offers many advantages. It is made of tin, except the inner receptacle for the blood, which is silver-plated. This inner receptacle is surrounded by warm water, to maintain the temperature of the blood; and a thermometer fixed to it enables the temperature of the water to be ascertained. It is essential that the blood be of a proper temperature for the injection. A tap in the side enables the water to be drawn off, and one in the bottom lets the blood flow through the elastic tube. A short piece of glass tube inserted into the elastic tube enables the operator to see if the blood is flowing. By raising or lowering the apparatus, the pressure, and consequently the rate of flow of the blood, can be increased, or lessened, or stopped; and, should a block occur, the piston can be employed to clear out the tube, or even, if need be, to gently force the blood into the vein. This is rarely necessary or advisable, gravity being usually sufficient to overcome such obstacles as prevent the flow of the blood. The outer receptacle of the apparatus being filled with water at about 100 deg. Fahr., the blood is to be drawn, whipped, and poured into the inner receptacle, the bottom tap having previously been closed. The vein of the patient having been laid bare, a double ligature is to be passed underneath it, and cut in two. With one of the ligatures thus placed in position, the vein is tied, to prevent escape of blood when the vein is opened for the introduction of the nozzle of the transfuser. With the other ligature the nozzle is secured after its introduction into the vein, by which means all escape of blood backwards is prevented. The patient need lose little more blood throughout than what escapes when the skin is divided. The bottom tap is then to be turned, and the blood allowed to flow; the elastic tube being held between the finger and thumb near the nozzle. When the whole tube is full of blood (so as to prevent air contained in the tube escaping into the vein), the nozzle is to be inserted into the vein, and tied into it by the gut or silk ligature previously passed under the vein. While the ligature is being applied, the elastic tube is to kept squeezed by the fingers and thumb. The transfuser is then to be raised from four to six inches, the pressure taken off the tube, and the blood allowed to run into the vein. The finger and thumb being kept on the elastic tube between the nozzle and the glass tube will enable the current to be instantly stopped, should an air-bubble, or clot, etc., be observed in the glass tube. Should such an accident occur, the nozzle must then be withdrawn; the air-bubbles, etc., be allowed to escape; and the nozzle be then reintroduced. Anyone can use this apparatus; and, as there is nothing to get out of order, it is always ready for use. It can be made for a few shillings.* The metallic part measures seven inches in height and five in diameter.

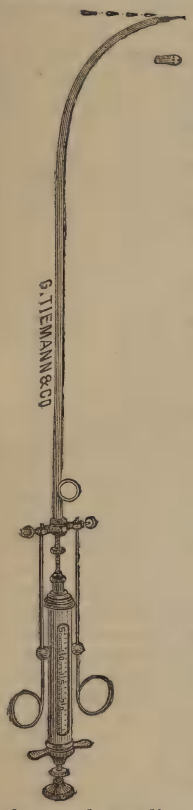
LAW'S IMPROVED STEEL-WIRE STYLETS

Messrs. Samuel Law and Sons, of Cleckheaton, have forwarded to us samples of their patented Tinned Steel Wire. Its great strength and wonderful elasticity give to it great advantages over all other kinds of wire for the manufacture of stilettoes of every kind. We have seen a few made for the hollow needles of subcutaneous syringes; a trial of these is conclusive of their superiority over other kinds of metal. When the hollow needle has been partially closed, either with rust, or, say, a crystallised alkaloid salt, or dirt, the stilettoes are so strong and elastic that they can easily clear away every obstruction, and thus prevent the trouble of sending them to the surgical instrument maker to repair so often as hitherto. Messrs. Law and Sons supply either stilettoes, or a sufficient quantity of the wire to make them from, to last a life-time, with even less than ordinary care, for the hypodermic needles, at extremely reasonable terms. They keep in stock every other gauge or thickness of the wire, to suit any other purpose, such as stilettoes for catheters, etc.

* The nozzle in use is the same as that employed by Dr. R. M'Donnell, F.R.S., of Dublin. Dr. M'Donnell has described his apparatus and some cases in the *Dublin Quarterly Journal of Medical Science*, November 1870.

AN INSTRUMENT USED IN A NEW METHOD OF TREATING NASO-PHARYNGEAL AND LARYNGEAL TUMOURS.

Dr. C. R. Upson, Surgeon to the Department of Nose, Throat, and Lung Diseases, Atlanta Hospital, Atlanta, Georgia, writes in the *New York Medical Record*, p. 557, as follows.



'I think it is generally conceded by laryngologists, that none of the methods of treating naso-pharyngeal tumours hitherto suggested can claim to have been to any considerable extent successful. The forceps, the *écraseur*, the ligature, electrolysis, and the cautery, have each, in its turn, been recommended and tried for the removal of these growths; yet sooner or later they are found to recur, and while it does not surprise the surgeon, it renders the patient timid about submitting to a second operation which is liable to be attended with like results. Some months since, a new method of treating naso-pharyngeal growths suggested itself to my mind, *i.e.*, by hypodermic injections of various substances—the same, in fact, as has long been practised by myself and others for the destruction of nasal polypi.

'For this purpose I devised the instrument represented in the accompanying drawing, which in my hands has given the highest satisfaction.

'It consists of an ordinary hypodermic syringe, provided with a long hollow needle, which is passed through a silver cannula properly curved at its extremity. The outer surface of the needle, for a short distance from its attachment to the syringe, has cut upon its surface a screw-thread, which is fitted with a traverse-nut, to regulate the depth of puncture of the growth. Two shanks, with finger-rests at one end, are passed through rings on the side of the syringe, and attached at their other extremity, by means of set-screws, to the cannula, to enable the surgeon to operate the instrument with one hand. The flat wings at the end of the syringe serve as thumb-rests. The tip of the cannula is made to unscrew, and in its place can be fitted the fine spray-jet which accompanies the instrument.

'With this jet, applications of any desired medicament can be made either to the pharynx or larynx.

'The *modus operandi* of my instrument is briefly described. First charge the syringe with the desired quantity of the solution to be injected—I generally prefer acetic acid, gtt. x—xv; then place the patient in a good light, either direct or reflected; draw forward and depress the tongue with a proper instrument, which may be intrusted to the patient to hold, or the tip of the tongue may be covered with a napkin, drawn forward, and held out of the way by the patient. After cautioning the patient to breathe quietly through the nose, introduce the rhinoscopic mirror below and a little back of the palate, and as soon as you secure a good image in the mirror of the growth, introduce the cannula with the free hand; project the needle the desired depth into the growth, move the thumb back from its rest to the piston, and slowly inject the contents of the syringe into the tumour.

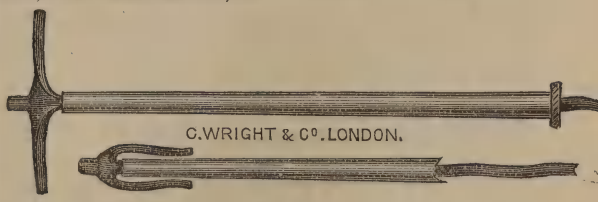
'The syringe was made for me by Messrs. Geo. Tiemann and Co., of New York.

'Since its receipt, several months since, I have used it in three cases of naso-pharyngeal tumour, and in each case with satisfactory results, *i.e.*, the destruction of the growth. Of course I cannot at the present time say positively that the tumour will not recur; but, judging from the success which has almost invariably attended the same operation in the case of nasal polypi, it is not at all unreasonable to expect like results from its use in naso-pharyngeal growths. At any rate, there is much in the simplicity of the operations to commend it to the laryngologist, especially as we may at least feel assured of as satisfactory results from its use as from any other operation. The instrument is also designed to be used for the removal of interlaryngeal growths, and lastly, it will be found useful as a pharyngeal and laryngeal aspirator.'

DAVY'S INDIA-RUBBER DRAINAGE-ANCHORS FOR THE TREATMENT OF ABSCESS.

Mr. Richard Davy, Surgeon to the Westminster Hospital, who formerly invented some retentive drainage-wires and a hastate knife for the treatment of abscesses, states that these drainage-anchors now under consideration are but modified drainage-wires. Experience proves that the projecting wire causes some inconvenience to patients, by reason of its non-flexibility, and by its catching in the dress, or causing pain on inadvertent motion. All the benefits of the wire, and none of its inconveniences, are secured by the use of India-rubber anchors.

The diagrams show well the India-rubber anchor expanded, and the wings depressed by the sides of the silver introducing cylinder. The whole of the appliances may be bought at Messrs. Wright and Co.'s, 108, New Bond Street, W.



Any abscess-sac may be laid open by the hastate knife, and the anchor immediately introduced inside the silver cannula; directly the wings reach the sac they expand, and the cannula withdraws itself from the India-rubber shank, leaving the anchor dropped, removable or not at the surgeon's discretion. The wings must be clipped proportionately to the size of the abscess-sac.

The pliability of the rubber shank gives no trouble; the pus drains by its side freely; and Mr. Davy writes, in the *British Medical Journal*, 'I am sure that in my own practice no mishap has ever occurred through its use. I have seen many hundreds of these anchors in abscess-cavities—in the face, neck, and other exposed quarters; the cicatrix that results is almost unnoticeable. Repeatedly have these anchors lain at rest, acting as drainage agents, for one, ten, to twenty-one days; a quick pull of the

surgeon's hand on the shank, with a finger on either side of the wound, as counter-resistants, will weigh the anchor, and allow the wound to readily close.'

AN IMPROVED EAR-SPOUT.

The annexed cut represents the common ear-spout, both as sold by the instrument dealers and as improved by me. As ordinarily made, its *raison d'être* is difficult to discover, for it does not in the least obviate the use of the basin unless the patient wears a rubber suit.

Fig. 2.

Fig. 1.

The basin has the disadvantage of often being in the way of the syringe, and, as usually made, unless it is held steadily and in a horizontal plane, its contents are apt to be spilled.

By adding to the common spout (Fig. 1) a shield in front, and having a tin tube and the necessary length of rubber tubing attached to its lower extremity, we have an instrument (Fig. 2) by which the ear can be syringed without danger of wetting the clothes. The patient holds it readily to the ear, and the rubber tubing conducts the water to a receptacle placed in any convenient position.

This instrument can be obtained of Messrs. Leach and Greene, 1, Hamilton Place, Boston, U.S.

NEW CLINICAL THERMOMETER.

Messrs. Mayer and Meltzer show, at the International Medical and Sanitary Exhibition, an entirely new form of clinical thermometer; which is about the size and shape of one of the small watches now so much used by ladies. The accompanying illustration gives a good idea of the size and appearance. With the exception of the watch-glass which covers the dial, the instrument is entirely constructed of metal, and is therefore named the 'patent unbreakable metal clinical thermometer'. When it is to be used for taking the temperature of the axilla, it is convenient to screw the long handle through the ring of the instrument; by giving a half turn to the ring, the needle is stopped at any point, as in a stop-watch; it is also sufficiently delicate to be used as a surface-thermometer, and its accuracy is guaranteed. The scale on the dial of the instrument shown is unnecessarily extensive for clinical purposes; but this can be easily rectified in future models, the bulk also will probably be reduced in future. The instrument is patented in England, France, and Germany.

SLATER'S PATENT DISINFECTANT HOSPITAL BLANKETS.

Hospital managers, sick-nurses, and householders, who may have the misfortune, as most people have in the course of their career, to have charge of cases of infectious disease, will be interested to hear of the new form of disinfectant hospital blanket, which has been introduced by Messrs. H. and L. Slater, of Manchester. These blankets are not only convenient for hospital use, but specially for household use, where it is desired and is most important to secure thorough disinfection, and to employ agents which are likely to limit contagion. The new blanket is cheap, light, and durable. It is reported upon favourably by experienced nurses, as well as by medical men of skill and special knowledge in sanitary matters, amongst whom are Dr. R. T. B. Taaffe and Mr. Joseph J. Pope.

MEDICAL AND SANITARY EXHIBITION AT SOUTH KENSINGTON.

CONCLUDING NOTICES.

As our space last month did not admit of our noticing many excellent exhibits at this useful exhibition, we continue our critical remarks in the hope of their being useful to our subscribers as a permanent reference for surgical and medical necessaries.

Amongst the appliances in surgical belts, abdominal supporters, elastic stockings, etc., the exhibits of Mr. Bourjeaurd, Davies Street, W., deserve especial mention. Instead of being woven in one piece in the ordinary manner, Mr. Bourjeaurd has his appliances made in strips or ribbons, of different widths, which are afterwards very securely and beautifully sewn together. The object attained by this arrangement is that if a greater pressure is required against any particular part of the limb or body, a portion of the stocking or belt is taken out and another piece of less elasticity is put in, in its stead. Thus, the amount of pressure is from time to time regulated with the greatest nicety, an advantage not to be over-estimated. In female hernia it is well known the band worn by the patient often gets displaced. To obviate this, Mr. Bourjeaurd provides an air-pad with a minute tap and tube attached, and by the assistance of a common inflater, air is forced into the pad, and can, of course, be regulated as to quantity, the pad giving ease to the wearer and assisting to keep the band in place. A similar arrangement is carried out in the belts for displacement of the womb; and he provides a riding-belt, very light but strongly woven, of the same character. His suspensory bandages are also of an improved construction, very light, and made to button on the shirt, while retaining the usual band. He is also making an improved urinal, so constructed that escape or leakage is impossible in whatever position the wearer may happen to be. The Elastic Stockings, Belts, etc., made on the principles here named, are beautiful appliances, and are sure to be appreciated by the profession.

In Dental Appliances the collection was extensive and good, and in this department the exhibits of Messrs. Ash and Sons, and the Dental Manufacturing Company, Broad Street, Golden Square, showed to advantage. Air and Water-Beds, Cushions, etc., of the most approved construction, were well represented, and amongst the newest houses connected with this branch we may mention the exhibits of Messrs. Pocock Brothers, Southwark Bridge Road, as deserving attention, independently of those we illustrated in our pamphlet. We have entered so fully into the various pharmaceutical pre-

parations in the exhibition pamphlet, that little remains for our pen, except to mention a few other exhibits of interest that were unfortunately shut out of that publication, through their not reaching us in time.

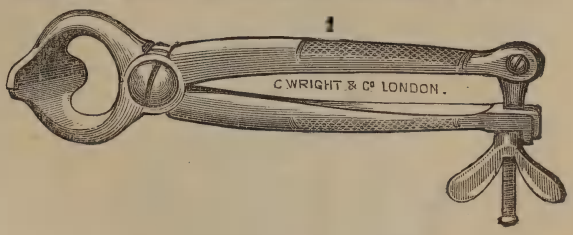
Messrs. Lehmann, Red Cross Street, E.C., the British agent for Œttli's Improved Milk Food, prepared at Montreux, Switzerland, by the Swiss Milk and Food Company, showed their popular preparations, which are entirely free from starch, and possess all the elements of pure Swiss milk. For table use, diluted with water, this milk is one of the best of the condensed order to be obtained, and it is equally well adapted for culinary purposes. Another preparation, shown by Mr. Lehmann, of the same company's manufacture, is an article called 'Zea', for which great advantages are claimed. It is asserted to be composed of sundry nutritive elements, is agreeable to the taste, low in price, and amongst other uses will make a palatable soup in a very short time, and can also be used for puddings, sauces, gravies, in conjunction with Liebig and similar preparations. Its low price will no doubt materially assist it in becoming popular with a class to whom many of the preparations of the day are practically prohibited by their price.

Another preparation of Malt exhibited is that of the Maltine Manufacturing Company (Limited), of Great Russell Street, Bloomsbury, which differs from others in the market, in so far that it is prepared from the three cereals, of barley, wheat, and oats. It is of American invention, and judging from the reports that reach us, is very carefully manufactured, the works and laboratories occupying a large space on the Hudson river. Professor Attfield says 'that it is far richer, not only in the directly nutritious materials, but in the farina-digesting diastase, than ordinary malt extracts'. He also says, 'that in comparison with the alcoholic malt extracts, it is about ten times as valuable as a flesh former, from five to ten times as valuable as a heat producer, and at least five times as valuable as a starch digesting agent. It contains unimpaired and in a highly concentrated form, the whole of the valuable materials which it is possible to extract from either malted wheat, malted oats, or malted barley'. Numerous English physicians and surgeons also testify to its invigorating and health-restoring properties. It is made up in a variety of different ways, in connection amongst others with cod-liver oil and pancreatine, the latter being in sufficient quantity to digest the oil.

Messrs. Southall Bros. and Barclay, of Birmingham, exhibit, amongst other articles, samples of the original collection of specimens of the organic materia medica of the British pharmacopœia for the use of medical and pharmaceutical students. These collections, done up in neat wooden boxes, are sold at a very moderate price, and consist of carefully-selected and characteristic specimens of the roots, barks, flowers, fruits, leaves, resins, gums, etc., of the British pharmacopœia. Each specimen bears a label, containing a description of the source from which the article is derived, its natural order, characters and tests, dose, and the names of the pharmacopœial preparations into the composition of which it enters. The student is thus enabled to study the materia medica with the actual substance, as well as the descriptive text, before him, an advantage to which a large number have heretofore borne testimony.

Mr. J. S. Haywood, Castle Gate, Nottingham, exhibits a collection of his specialities in the form of elastic stockings, bandages, suspenders, chest expanding braces, and small waterproof goods for the nursery, etc. Amongst these may be mentioned his elastic abdominal supporting belts, for weakness, pendulous abdomen, umbilical and inguinal hernia, well made, and giving perfect elasticity at the points required. The stockings, knee caps, etc., appear to be well-made appliances, and the braces can be readily made or adapted to any particular defect in the system that requires support, or the arresting of a growing evil. Mr. Haywood's productions, generally speaking, are well worth the notice of the profession.

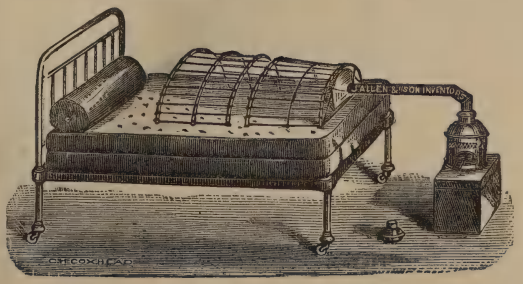
Messrs. C. Wright and Co., Surgical Instrument Makers, New Bond Street, show a good assortment of general instruments, including Benham's Clamp, as used for the treatment of hæmorrhoids by crushing, which we illustrate. Without enumerating the many other advantages to be gained by the use of this clamp, it may be



pointed out that it so completely crushes the pile as to leave only a slight fringed remnant, without any pain or bleeding, rendering the convalescence of the patient a matter of a few hours. Another article of interest shown by the firm is Benham's Steam Antiseptic Spray Producer, of which they are also the sole manufacturers. Our illustra-

tion represents the apparatus, which is composed wholly of metal, and is provided with an excellent safety valve and glass gauge for ascertaining the contents of boiler; the handle is also of a very convenient form, and can be held for a considerable time without tiring the hand. The apparatus is constructed to produce an uninterrupted spray for upwards of an hour, and, being inexpensive and portable, is well adapted for operating and dressing for hospital or private practice.

Messrs. James Allen and Son, Marylebone Lane, the well-known makers of Medical Baths, and numerous appliances for the invalid and sick room of metallic substances, exhibit several of their specialities in this direction, the principal of which is their Portable Turkish Hot Air and Vapour Bath, of which we append two illustrations, showing its application in two forms. It is claimed to be



capable of generating a larger amount of heated air and vapour than any other portable apparatus. A bath of either, or the two combined, can be obtained in a few minutes, and may be taken from 15 to 40 minutes at a cost

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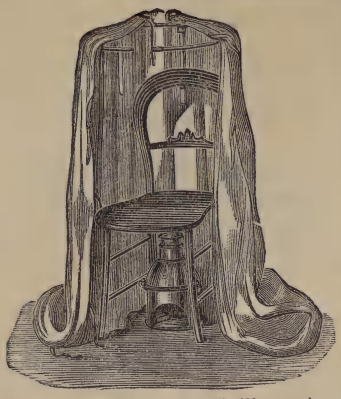
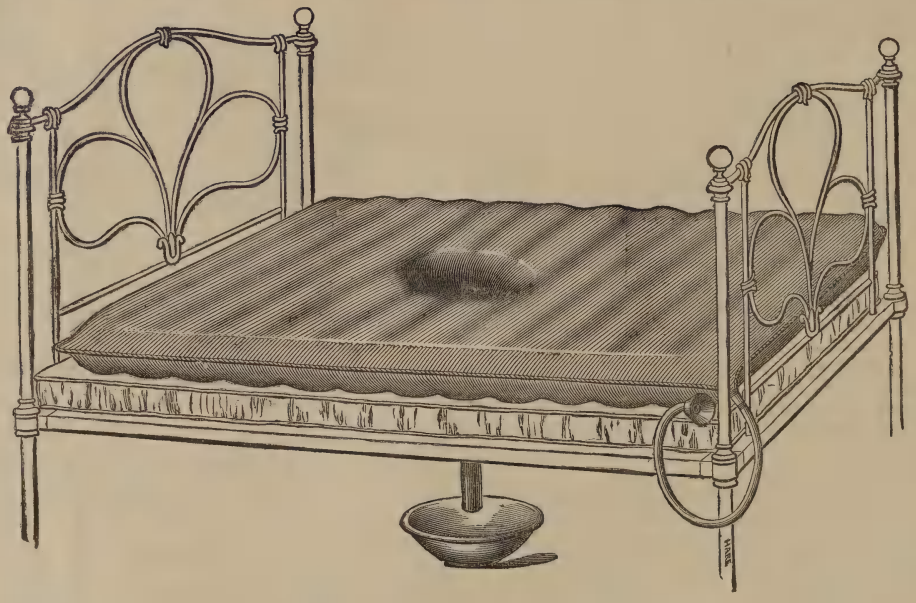


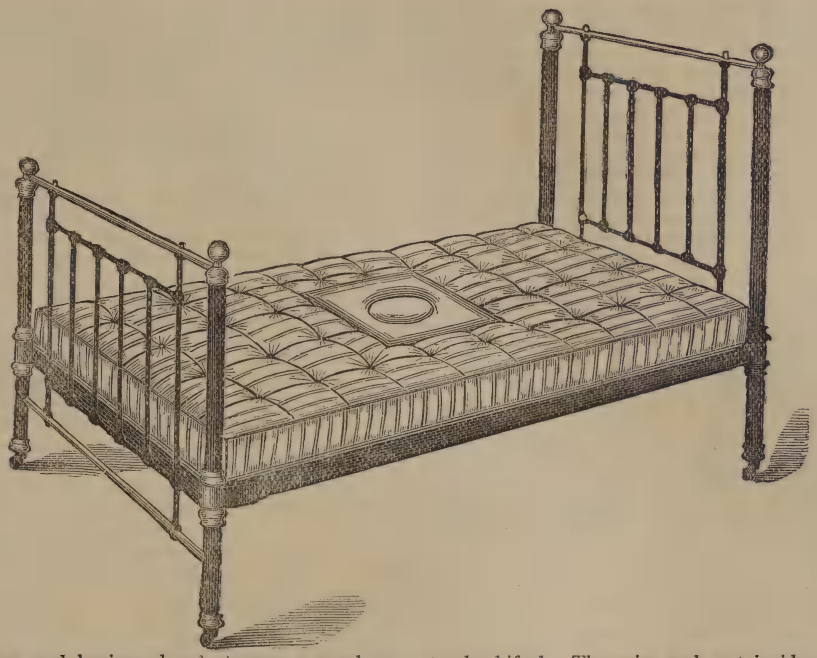
of about threepence. The second illustration shows its application attached to the under part of a chair, with cloak, tinned iron supports, etc.

Messrs. Hooper and Co, Pall Mall, have an interesting collection of their celebrated Elastic Water or Air Mattresses, Cushions, etc, for Invalids, to be used on an ordinary bedstead or couch. One of the most important of these is their Elastic Central Tube Water or Air Mattress, specially constructed for conveying away the evacuations in cases of paralysis, disease of the spine, accidents, debility, old age, etc., of which the accompanying drawing will enable the reader to form a good idea. The advantages this bed offers can scarcely be over estimated, and it has received high commendations from a large body of the profession. Their Lever Invalid Bed-Lift or Elevating Bed and Elastic Water Mattress, affording a ready means of raising an invalid, is an equally meritorious invention. Provision is made for the use of the bed-pan (the lift on which the patient rests having a suitable opening for the purpose); for ablutions; for elevating the back and head; for ventilation and adjustment of the bedding, etc. The principle of this elevating bed being the simple lever without pulleys, cranks, or wheels, the invalid is raised, and again replaced, with great facility. Much pain and exhaustion are thus spared to the invalid, and the attendant's labour is materially lightened. Air and Water Cushions, and articles of a kindred character, make up the remains of this interesting exhibit. Messrs. Hooper have had the honor of supplying Her Majesty, their Royal Highnesses the Prince and

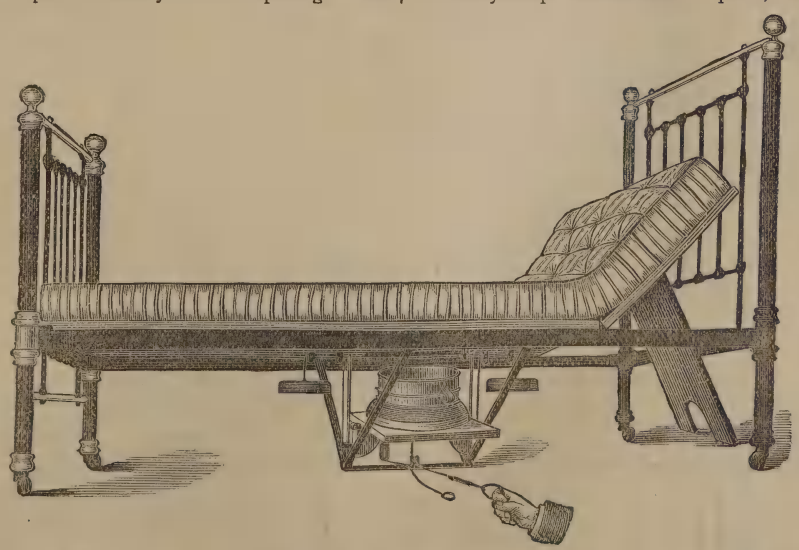


Princess of Wales, and the principal Courts of Europe, with these Appliances. The firm also exhibit Seltzer Water as originally introduced by the late Mr. Hooper.

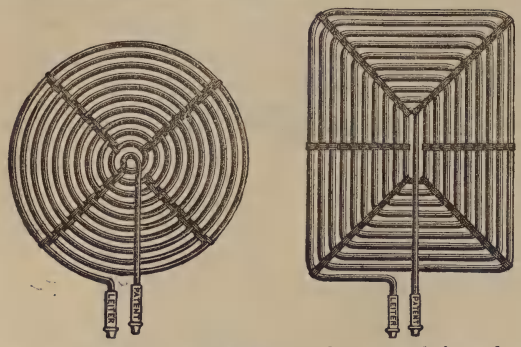
Messrs. Tapling and Co., Gresham Street, exhibit an Invalid Bedstead (Dalton's patent), the special appliance of which can be adapted to any bedstead, either in hospital or private houses, by simply removing the laths. The object of the patent, a self-adjusting invalid bedstead, is to enable the nurse, by simply pulling a ring attached to a cord, to lower a hair-stuffed plug, shown on the accompanying drawing, and having placed thereon a metal or earthen pan of the same shape, it is allowed to ascend by an arrangement of balance weights of the most simple character, and this pan fits exactly into the opening. The second illustration shows this arrangement. When the patient has used this appliance it is lowered by the same means, removed, and the hair-stuffed plug raised in its place, and the bed again made complete. The patient is thus enable to remain perfectly still, and is spared the pain and inconvenience attending the slightest change of posture. A headlift is fitted to and both ends are attached to the centre by hinges. Not only can the appliance be adapted to either side of a bedstead, but by turning both ends on the centre it becomes portable for transmission. The appliance, as a whole, is well worthy of attention.



Mr. T. W. Stidolph, High Street, Dartford, sends samples of his Improved Institution Bedstead, with Indestructible Cloth Sacking. The principal feature in these bedsteads is that the sacking is endless, and may be constantly shifted. The noise and rust incident to iron laths, and the fretting and wear of mattresses on the same, are by this arrangement entirely avoided, and the tension can be always kept to the extreme point, thereby giving it almost the advantage of a spring mattress. For examination, and for cleansing when soiled, the sacking can be instantly released and removed with the same facility as a round towel, while the open frame promotes cleanliness, which bedsteads with open joints and dovetail joints and laths do not possess to the same extent.

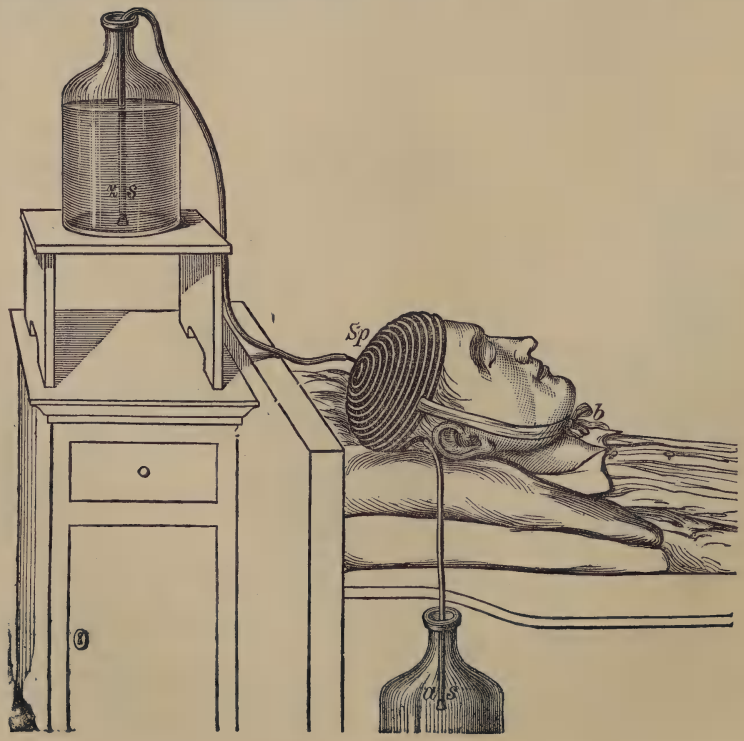


Messrs. Krohne and Sesemann of Duke Street, Manchester Square, are also well represented by Surgical and Orthopædic Instruments and Appliances, but the greatest novelty in the last-named department is a collection of Leiter's Pliable Metal Temperature Regulators, a new apparatus for continuous application of warmth or cold to different parts of the human body, and a new glass irrigator for wounds, artificial feeding, washing out, and injecting the stomach, etc. It would require more space than we have at our command here to do full justice to this invention, which has, we believe, been patented in most civilised countries. Passing over the old and ordinary methods of applying heat or cold to local parts of the body, we come to the method of constant water circulation employed by Richardson, Thornton, Esmarch, and others, with India-rubber appliances, which have largely taken the place of ice-bags, and more primitive methods. To Leiter, however, belongs the merit of having produced, by the employment of pliable metal tubing, a temperature regulator which will fulfil the requirements of the surgeon and physician for local application of warmth or cold in a constant and easily-regulated manner. The advantages of the new material



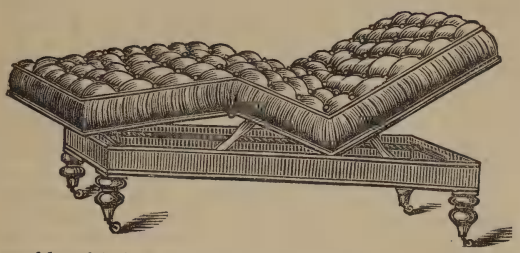
over India-rubber will be seen at a glance, for, being a bad conductor, the circulation of a large quantity of iced water is required to produce a reduction of temperature of the part to which it is applied. Numerous other objections, well-known to the profession, are attendant upon the use of India-rubber, all of which are obviated by the use of the pliable metal tubing. This invention consists in coiling and forming into various shapes, composition metal tubing having an inside diameter of from a sixteenth to an eighth of an inch, as in the subjoined sketches, which show two of the simplest forms; but they can be easily and rapidly made of any size, and the metal being so ductile, they are bent to the required shape by the merest pressure. They are provided with an inlet and outlet pipe, and the mode of application is shown in the next engraving, the flow of water in the first place being started by siphonage. When the upper or supply-bottle is nearly empty they can be reversed, and the flow of water continued for the required time by constantly carrying on this plan. For hot-water application the arrangements are the same, with the addition of a little lamp with a circular wick, burning methylated spirit or petroleum. Above this is a little boiler having a spiral coil inside through which the water circulates, and becomes heated before descending to the metal pad on the patient. A thermometer is affixed in a vertical position by the side of the lamp, and the tube leading to the pad is carried down it, the temperature can thus always be seen at a glance. Leiter's glass irrigator is a funnel-shaped vessel of glass, having a long tube connected with its lower part, on the end of which is fitted a vulcanite plug. The advantages claimed for it are, that it can be kept cleaner than those made of tin, zinc, or other metals, while, on account of its funnel-form, a greater and more uniform hydraulic pressure is obtained than with irrigators of cylindrical or other shapes. Messrs. Krohne and Sesemann's catalogue contains a number of illustrated examples showing how the irrigator, and the metallic temperature regulators can be utilised.

Mr. T. McIlroy, Charlotte Street, Fitzroy Square, exhibits his *post-mortem* or Anatomical Weighing Table, which, fitted with a complete weighing machine enclosed underneath, gives the weight of the body or any part thereof, from ¼ ounce to 600 pounds. It will raise and revolve at any given height, carry off fluids, etc., and drainage and downward ventilation are well provided for. There is also



an Examining Chair of ingenious construction, with almost every conceivable movement required for such an apparatus; an Operating Table of similar construction as regards its various movements; and an Operating Chair for fistula, invented by Bozeman of New York.

Mr. Wm. Hamilton, Ship Street, Brighton, shows an Invalid Couch called the Grasshopper, which we illustrate,



capable of being moved into any required position. It is also made with movable arms and post-rest.

Messrs. R. W. Winfield and Co., Cambridge Street, Birmingham, and Holborn Viaduct, the eminent Brass Bedstead Manufacturers and General Brass Founders, exhibit several Appliances for the Ward and Sick Room, Lamps, Gas Fittings, etc. A very useful article consists of a 'Kettle Bracket', which combines a light with a burner for boiling, etc., and by the peculiar arrangement of the kettle and pan sold with it, enables the food to be most delicately cooked, and without any odour. There are some Improved Patent Lamps for burning paraffin oil and other volatile oils, well worthy of attention, intended always to keep a full supply of oil to the wick, whatever the quantity in the reservoir may be. At the upper part of the body is a horizontal division dividing it into two unequal parts, the upper part constituting the wick dipping cup or vessel, and the lower and larger part the oil storage reservoir of the lamp. At one side of the divided body of the lamp is a hollow cylinder or barrel, in which a cup-shaped piston or lifter works freely. The upper part of the barrel projects into the wick dipping cup, its open top being a little below the level of the top of the dipping cup. In the wick dipping cup are overflow pipes opening into the storage reservoir. In the barrel, and a little above the bottom of the storage reservoir, is a series of perforations, through which the oil from the reservoir flows into the barrel, the oil in the reservoir and barrel being thereby maintained at the same level. The cup-shaped piston or lifter is raised or lowered in the barrel by means of an endless chain, which can be actuated outside the lamp, and the arrangements, broadly speaking, are somewhat on the principle of the moderator lamp. There are a variety of Patent Ventilating Lamps for Gas, and several examples of Gasaliers, Brackets, etc., of very choice design. The firm also exhibit a variety of Decorated Copper Panels to be used in building construction, suitable both for domestic and hospital architecture. The few specimens of Metallic Bedsteads shown present some very pretty and novel features. There are also Fenders, Fire Dogs, and Brasses of the Queen Anne period, Metallic Umbrella Stands, Fire Screens, and Spark Guards of the 17th and 18th century styles, examples of Wrought Iron Work of the 12th and 13th centuries, Church Furniture, Lecterns, Metallic Clock Cases, etc. There are also a Patent Combined Chair, Couch, and Bedstead for the use of Invalids, and a Cot designed specially for Children's Hospitals. This consists of three essential parts—the middle or seat part, the head part, and the foot part, together with a fixed framing supporting the three parts. The seat part is jointed at one extremity to the head part and at the other extremity to the foot part. The several parts can take the following positions respectively. The head can be raised into a nearly vertical position and lowered into a horizontal position. The seat in its normal position is horizontal, but its front can be raised so as to make the seat take an inclined position. The foot can be moved from nearly vertical position into a horizontal position. The several parts can be fixed in any of the positions into which they are brought. The head and foot parts are each provided with counterbalance weights, so that they are easily moved into any required position. The edges of the head part have rods affixed to them, constituting prolongations downwards of the sides. The lower ends of these rods are attached to connecting rods jointed to the lower end of the foot part. When the head part is moved in any direction the foot part moves by the action of the rods described in a like direction—that is to say, if the head is brought upright the foot part is lowered, and if the head is depressed into a horizontal position, the foot part is raised into a horizontal position. In the case of a child's cot, side rails are attached to the framing, and the movable foot part is dispensed with.

Mr. W. H. Lloyd, Harborne, Birmingham, exhibits a collection of his excellent Bronchitis Kettles, and a new combined Vapour Bath, Food Warmer, and Bronchitis Kettle. This little apparatus provides the sick chamber, not only with apparatus for regulating the degree of moisture required, but with the means of producing hot water for tea or coffee, or of heating milk, gruel, broths, or soups in a few minutes in the simplest manner, and practically, without trouble. It consists (1) of a movable stand, containing a lamp for burning methylated spirit; (2) a kettle with an elongated spout for throwing a fine spray of steam in any desired direction; (3) a shorter spout which can be substituted for the other when hot water for making tea or coffee is required; (4) a water bath, with earthenware basin, in which milk, gruel, broth, or other food may be heated as required. The whole apparatus is sent out in a neat japanned tin box, in which it can be kept when not required for use. The kettle and the lamp are so adjusted as to their contents, that the latter will continue to burn for three hours, during which period the kettle will discharge steam, and when the light expires there will remain a small quantity of water. Thus the kettle will never be in danger of burning. The cost of the spirit is about one half-penny an hour. An excellent vapour bath may be extemporised by means of this apparatus. The kettle fitted with the short spout is to be placed under the seat of a chair, with the spout directed backwards, and the lamp lighted. The patient is then to be enveloped loosely in blankets, and to be seated in the chair, leaving sufficient space within the blankets for the steam to completely surround his body. The blankets must be secured at the neck to prevent the escape of steam.

Messrs. Benham and Sons, the old-established ironmongers and sanitary engineers, of Wigmore Street, W., exhibit a variety of useful appliances adapted both for hospital and general use. They consist of an Independent Hospital Cooking Stove, requiring no brickwork or setting, burning wood, coal, or any fuel, capable of boiling, steaming, baking, roasting, stewing; made in various sizes; used at several military hospitals in the colonies, etc., and for camp at Cyprus. A Disinfecting Oven, heated by steam, either by direct action, moist or dry, by jacketed sides; capable of destroying all insect life, etc. Another of the same character, heated by gas; very useful where steam is not available. A Ward Kitchen Range, with oven, boiler, hot-plate, etc., heated by coal and gas, combined or separately; used at Manchester Union Infirmary and elsewhere. A Hospital Slop Sink, of enamelled cast iron, in polished deal frame, very cleanly, very capacious, and thoroughly trapped; used at the Radcliffe Infirmary, Oxford, and elsewhere. A Hospital Coal Cellarette, 'The Londonderry,' strong, light, and capacious; filled at top, emptied at bottom; mounted on silent wheels; made in various sizes. There is a Hospital Bath, strong and portable; on silent wheels; with draw-off cock; and a Child's Hospital Wash Stand of polished deal and slate top, with enclosed closet; as used at the Evelina Children's Hospital. A Child's Hospital Clothes Bin, of polished deal, in two drawers, with hinged lids; as used at the Evelina Children's Hospital. They also exhibit Siemens 'Improved Gas Fire, for burning anthracite coal in an ordinary open grate, Anglo-German Porcelain Stove, presenting a clean enamelled surface, beauty of form with neatness; giving out pure inodorous heat; requiring little attention; and the Davy Wash-

ing Machine, as improved by Benham and Sons; simple and effective in its action; used at the Langham Hotel, Manchester Union Infirmary, etc. A Centrifugal Wringing Machine, adapted for hand power or steam; made by Benham and Sons in various sizes, is used in all large laundries. Their Ventilating Globe Light is shown as fixed to ceiling of room, with pipes for removal of gas products and vitiated air of room carried between the joists to the chimney shaft. Fresh air is also admitted by other pipes to feed the lamp and replace the air removed. Made in various ornamental forms and various materials, bronze, porcelain, glass, etc., and in plain inexpensive pattern for hospital use. Lately fitted throughout the New Nottingham University College, Museum, and Free Library; 200 lights in all.

Messrs. ROBERTS and Co, New Bond Street, London, and Place Vendôme, Paris, who are agents for several noted French productions, exhibit a variety of Irrigateurs, or French Enemas. These appliances, of ingenious construction, are on the principle of the Moderateur Lamp, being dependent for their motive power on a spiral spring; and a similar action to that employed in the lamp named completes the whole of the mechanism, the only difference being that, instead of the water being forced upwards as the oil is in the lamp, a tap is fixed near the bottom, to which is attached a length of India-rubber tube, and a stream of water, which can be regulated to a nicety by the tap, flows through this entirely by automatic action, and so prevents any exertion on the part of the user, as with the ball or piston syringe, the admixture of air is entirely avoided, and the suction sound, often so objectionable to delicate persons, is entirely absent.——A 'Goudronniere', or tar inhaler, is another article of French manufacture exhibited by this firm, and consists of a small oblong tin bath, filled with tar of the red pine. In this bath, several sheets of tin connected with a cover are dropped. By raising these to a certain height, and securing them in that position by a spring, they represent a superficial area of several square feet of tar diffusing its volatile principles through the air, calculated to relieve the sufferings of those afflicted with asthma, bronchitis, etc.——Davidson's American Enema Syringe is also shown, a compact little appliance readily taken to pieces for cleaning, etc.——In preparations, the firm exhibit Vin de Quinquina, or Bark Wine, and the celebrated Vin Mariani, or Coca Wine, which has been noticed in the pages of the LONDON MEDICAL RECORD on previous occasions, and is yearly increasing in popularity. There are several other preparations in Messrs. Roberts and Co.'s collection, mostly of French manufacture. Amongst these we may mention a 'Poudre Purgative', or Compound Liquorice Powder, a mild and gentle purgative, Santal Capsules, Capsules of Cod-liver oil, and of Castor Oil, Medicated Soluble Bougies, *perles de térébenthine*, and several others of a kindred character, in which the French chemist has devoted considerable skill and attention in perfecting and rendering them operative in a short space of time, while divesting them of their nauseous flavours.

Messrs. WM. BENGER and SONS, Sophien Strasse, Stuttgart, through their agents, Messrs. Newberger and Co, 53, Wood Street, Cheapside, exhibits a variety of Under Clothing, called Woollen Stocking-Nett Hosiery, of which they are the patentees and manufacturers. These articles, introduced upon a theory propounded by Professor Gustav Jaeger, in several of his works, and particularly in one named *The Normalkleidung; or, Rational Clothing System as a Protection to Health*, appear to be largely used upon the continent. They have a beautiful soft feel and texture, and are made of the finest wool only, though, as may be inferred from the title, they are woven under a different system from the ordinary wool clothing. It is claimed that, by the principle adopted, while retaining all the warmth of those woven in the usual manner, they act as conductors for the discharge from the pores during perspiration, while the old mode has an opposite tendency. They are made in garments both for ladies and gentlemen, are very moderate in price, and can now be obtained through any draper in the United Kingdom.

Amongst the other preparations exhibited in advanced Pharmacy, we may mention the 'Lactopeptine' of Mr. JOHN M. RICHARDS, Great Russell Street, W.C. This preparation is one of those which aim to reproduce the five active agents of digestion, combined in the same proportions that they exist in the human stomach, viz., pepsine pancreatine, diastase, sugar of milk or lactin, and lactic and hydrocholic acid.

We noticed two new non-alcoholic drinks by Messrs. J. MOORHOUSE and Co., Queen Street, Hulme, Manchester. One of these is named 'Sparkling Rozo', and contains glycero-phosphoric acid. It is pleasant to the taste, and is an agreeable form of taking glycerine and phosphoric acid for those who require those therapeutic agents. The other drink noted by us is a 'Sparkling Eupotus', a simple ærated water, flavoured with Jargonelle pear.

Messrs. MOTTERSHEAD and Co., Exchange Street, Manchester, exhibited a collection of Benger's preparations of the 'Natural Digestive Ferments', which have attained considerable notoriety. 'Liquor pancreaticus' contains the proteolytic and diastasic ferments of the fresh pancreas, and is said to be capable of converting proteids into peptones, and starch into sugar with wonderful rapidity. It is largely used in the preparation of peptonised or partially-digested foods, such as milk, gruel, soups, etc., and it has been attended with great success in the treatment of certain diseases. It is also intended to be employed medicinally in small doses, either mixed with food before a meal, or with a few grains of bicarbonate of soda in a wine-glassful of water. 'Liquor pepticus' is another form of the preparation, containing the constituents of the natural digestive principles of the stomach. It is prescribed in doses of one or two teaspoonfuls in a wine-glass of water, to be taken with or immediately after meals, especially those which include meat or eggs. A host of recipes accompanies these preparations for making various kinds of peptonised foods. We have every reason to believe they are well and carefully prepared, and may be regarded as thoroughly trustworthy preparations. Another form in which they were shown was Benger's Pancreatised, or Self-Digestive Farinaceous Food, for infants and invalids, which contains, besides diastase, trypsin, a natural digestive principle, capable of digesting the albuminous portions of grain, milk, and other substances, untouched by diastase, which causes it to be more suitable for delicate children, or those with impaired digestive powers. Two other useful forms in which these ingredients are present were shown in the form of Peptonised Beef Jelly and Peptonised Wheat Jelly. Messrs. Mottershead and Co. also exhibited the Continuous Current Leclanché Battery, and their Improved Uni-direction Induction Apparatus, exceedingly well made and simple in construction.

Amongst the specialities in foods and preparations for the sick and invalids, Messrs. BRAND and CO.'s collection showed to advantage. Their Essence of Beef, Mutton, Veal, and Chicken is well established in medical estimation. Their Savory Meat Lozenges are most useful to travellers, and invaluable on long journeys. The numerous other little articles of food, in the shape of Potted and Prepared Meats, etc., are useful articles of diet. Malt Extracts are well represented, and the sale appears to be very much on the increase. A Norwegian preparation of this article, said to be manufactured from Norwegian malted barley only, was shown by Mr. W. F. W. ECKELL of Christiania, Norway, which appears, from the testimonials, to be much appreciated in that kingdom, and to have a large sale; and the analysis comes out well in comparison with others of its class. That of JOHANN HOFF, shown by Mr. Newman, Railway Approach, London Bridge, has been before us for many years, and is generally favourably known amongst the profession. But the most popular preparations of Malt, or Malt Extracts, are no doubt those of Mr. LEOPOLD HOFF of Charterhouse House Buildings, E.C., and Hamburg. This bottled beverage has been before the public for many years, and has received high commendations in the most influential quarters. Experiments made by J. J. Coleman, Esq., F.S.C., etc., on the constitution of malt

liquors and their influence upon digestion and nutrition, who speaks in the highest terms of Leopold Hoff's Malt Extract, show us, amongst other things, that the amount of starch which became soluble in bread by the agency of various liquors, the bread used in each case being of the same weight, was: Burton ale, 15 per cent.; London porter, 30 per cent.; Wrexham ale, 26 per cent.; while Leopold Hoff's Malt Extract dissolved 60 per cent. Mr. Hoff's new preparation, Extract of Malt Jelly, appears likely to find considerable favour with the profession, as it can be prepared in such a variety of ways, and is introduced in a more concentrated form than any previous compound prepared from malt, obviating the objections hitherto made by many physicians and others to such forms of the extract. The present preparation is solid, not fluid, and can be taken in smaller quantities and with like effect, owing to its highly concentrated form. It is sent out pure and flavoured, also combined with iron, quinine, pepsine, and with various fruits. It is not sticky, is not overburdened with sweetness, an objection urged against similar preparations, and always leaves an agreeable taste in the mouth. Mr. Hoff's Hygienic Malt Chocolate is a delicious and nourishing article of food, and the Malted Chocolate Food for infants is no less meritorious.

Messrs. J. F. Macfarlan & Co., North Bridge, Edinburgh, exhibit two classes of preparations, the first being opium alkaloids and other substances used in medicine; and the second, antiseptic preparations used in Prof. Lister's system of surgical treatment. In the first case are morphia, codeia, narcotine, narceine, thebaine, papaverine, and pseudomorphine, with many of their salts. Among these are the muriate, sulphate, acetate, meconate, and tartrate of morphia. The last is now used to a considerable extent for hypodermic injection, it having the advantage over the acetate, in forming at once a clear solution in water, and the solution being free from acidity. There are muriate and sulphate of codeia, both of which are readily soluble in water. They show in glass basins, crystallisations of codeia and of morphia meconate. The other preparations which they exhibit in this class, are chloroform, salicin, alvin, chrysophanic acid, and sulphate of beberine, all of which are prepared by them on a large scale. In the second case is displayed a complete set of the Listerian antiseptic dressings, including antiseptic gauze, with bandages made from it, carbolised lint, jute, and tow; catgut ligatures, silk sutures, and oiled silk protective, in all of which carbolic acid is the active agent. They have also boric lint and wool, salicylic wool, pink jacconet, and eucalyptus gauze. The firm has given great attention to the production of this class of preparations, from their first introduction, and takes special pains to have the articles of uniform quality, never failing to contain a sufficiency of the antiseptic ingredient.

Messrs. Allen and Hanburys exhibit, side by side with their Finest Cod-Liver Oil, made by the ordinary process, for which they obtained the highest award at Philadelphia and a silver medal at Paris, their 'Perfected' Cod-Liver Oil, prepared in an altogether new and special way, and which is now well known for its almost absolute freedom from the usual nauseous taste and smell and property of not 'repeating'. They also show their new Malted Farinaceous Food, which they have patented, and which differs from other forms of Liebig's Food, in that the malt is present in a soluble, concentrated, and most active form, rendering the food not only most nutritious but self-digesting. Being cooked, it requires neither boiling nor straining. Their pure Extract of Malt is also shown. Besides the above, there is a large assortment of various Pâtés de Jujube, including a beautiful series of medicated ones, which are intended to supersede the ordinary hard, rough, and angular lozenges. These were first made at the suggestion of Dr. Prosser James. Chrisma, which has recently come into notice as a valuable parasiticide, as well as an inoxidizable basis for ointments, is also shown. A large jar of the Fluid Extract of Tonga, and a few samples of ordinary pharmaceutical preparations, such as Fluid Extract of Ergot, Tincture of Henbane, etc., of very excellent quality, complete Messrs. Allen and Hanburys' own exhibits. We must not pass over a new remedy for whooping-cough, from the United States, for which Messrs. A. and H. are agents, and which they exhibit, viz.: Page's Vaporiser and Cresoline. It is said to be a most valuable specific for the disease, and is already in extensive use throughout America. For further particulars of the above, we would refer our readers to the handbills, which can be obtained on application to Messrs. Allen and Hanburys.

Messrs. F. Newbery and Sons, 1, King Edward Street, Newgate Street, London, as agents for W. R. Warner and Co., Philadelphia, U.S.A., have a handsome case containing the Sugar-Coated Pills manufactured by that firm, which have attained great popularity. It is claimed that sugar is the only proper material with which to coat a pill:—1, Because it is more soluble than gelatine, glue, chalk, or talc, of which gelatine and glue are the same in substance and properties. 'Sugar-coated pills are more soluble than gelatine-coated or compressed pills.'—Professor Remington's paper read before the American Pharmaceutical Association, Boston, 1875. 2, That according to their process, no sub-coating of insoluble shellac or gum mastic, or 'oily' surface polishing is necessary. 3, That the direct application of heat is entirely avoided, and the masses can be coated when so soft as not to admit of being dipped in a hot solution of gelatine. 4, Sugar as a coating is not incompatible, as is the case with gelatine, etc., when brought into contact with certain kinds of food, astringent fruits, or wine containing tannin, by which the gelatine is converted into a condition of the basis of leather. 5, The preservative properties of sugar, and the tendency to attract rather than yield moisture, prevent the subsequent drying and hardening of the pills. 6, A round substance is more easily swallowed than one which is elongated, flattened, or pointed, there being no art in deglutition that would enable it to pass endwise. 7, The colour and shape of some varieties of oviform gelatinised pills, are so inelegant, by comparison with the spherical white sugared pill, as to be repulsive to sensitive patients. 8, Actual experiments which are enabled to be performed as to solubility, and the administration of a dose of cathartic pills, the effect of which is soon apparent, will practically demonstrate the truth of the claims put forth by Warner and Co.

Mr. J. N. Davidson, Manufacturing Pharmaceutical Chemist, Dundee, has an interesting collection of preparations, one of the most important being a Compound Cod-liver Oil Emulsion, which is also shown in another form, in which quinine is added; and in a third formulæ, called Compound Phosphorised Cod-liver Oil Emulsion; and in a fourth, in which quinine is present as well as phosphorus, the quantities being, in addition to the oil, one-fifteenth of free phosphorus in each ounce, and one grain sulphate of quinine per ounce. In each case the emulsion is perfect and permanent and does not separate. Mr. Davidson has succeeded in medicating this popular oil as to make it tasteless and scentless; and he makes no secret of his process. He turns the oil into paste by mixing 75 per cent. of it to 25 per cent. of pepsine, hypophosphite of lime, and lactophosphate of lime. The result is a paste that may be eaten like butter, and of most unobjectionable character. A host of the profession in North Britain speak in the highest terms of Mr. Davidson's formula.

Amongst the disinfectants, the exhibits of the Sanitas Company, Limited, Bethnal Green, London, hold an important position. Whether viewed as a disinfectant, a deodoriser, or an antiseptic, it is equally valuable, and it is peculiar as being the only known preparation that can claim to be both antiseptic and disinfectant in its properties; and unlike most other agents, it is not only non-poisonous, but is healthful, and leaves no stain on linen or furniture. It is unnecessary for us to enter into any history relating to the invention of 'Sanitas' through the experiments of Mr. Kingzett and Mr. Maximilian Zingler. That is well known to the sanitary world, and to the medical profession generally. We here wish to draw the attention of the general public to the various preparations for domestic uses

made by the Company, all of which contain, in a greater or less degree, the disinfecting properties of 'Sanitas.' The simple fluid called Sanitas is the strongest antiseptic known, but we must refer the reader to the pamphlet published by the Company for an account of the many uses to which it has been applied. 'Sanitas' Oil, produced during the making of the 'Sanitas' fluid, is the oxydised oil of turpentine, and has been found of invaluable use to the medical practitioner for various purposes, such as the irrigation of wounds, the anointing of sores or ulcers, fumigating apartments, etc., and, although of an oily nature, may be said to be an extremely concentrated form of the aqueous fluid, and is used in the preparation of all the 'Sanitas' products. The toilet fluid is another form of the aqueous character, called Toilet Sanitas, and is intended to take the place of the so-called toilet vinegars, or it may also be used in the bath, though the ordinary fluid, in the proportion of one pint to ten gallons of water, produces a luxurious bathing medium. The Sanitas Disinfecting Powder is packed in dredgers in a similar manner to carbolic acid. It is believed to be a more powerful antiseptic and oxydising agent than any other preparation of the kind, and it is perfectly healthful and pleasant. It is also made as a toilet and nursery powder, free from all mineral and poisonous matters, healing and soothing in its properties, and is specially recommended for infants. There is, in addition, the Sanitas Tooth Powder, and, without going so far as to say it is a specific for toothache, it is calculated to arrest decay; and used by persons, suffering from decayed teeth, and the constant liability to toothache, it, generally speaking, has a tendency to give relief, and to exert a soothing influence. Sanitas Oil is utilised for soaps, and the company manufacture a toilet soap with which the most fastidious can scarcely find fault. It lathers quickly and easily, glides smoothly over the skin, and produces a smoothness and softness to which few other soaps can lay claim. We have it also as an ordinary household and disinfecting soap, as a soft soap, and even as a furniture cream. Thus, in providing ourselves with the different preparations of Sanitas, we are surrounding ourselves with valuable, pleasant and useful agents, which reduce the dangers of infection to a minimum, and provide us with some of the most necessary articles required in the household.

Messrs. W. H. Schieffelin and Co., William Street, New York, have sent a handsome case and collection of their popular Coated Soluble Pills and Granules which have attained much notoriety in the United States, and received a silver medal at the Paris Exhibition, 1878, and first award at Sydney, 1879. The coating of these pills, which is to some extent a secret, is an inert, soluble compound, dissolving upon the tongue in all cases almost instantly, entirely tasteless, perfectly transparent and colourless, thus disclosing to the eye the exact colour and appearance of the principal ingredients, and at the same time certain substances, such as proto-salts of iron, phosphorus, etc., are effectually protected against oxidation, etc. The firm maintain that the action of their pills are as prompt as any uncoated ones, which they contend is not the case with those coated with other substances.

A Plan for the Re-construction of University College Hospital on its present site is shown by Dr. G. V. Poore and A. Waterhouse, Esq., A.R.A. The following is Dr. Poore's description of the plan. The plan has been accurately adapted to the present site; this being a matter in which there was no choice. It is by some thought advisable that hospital wards should be in one-storey buildings, and this rule might be followed if cost were no object, *and if there were no high buildings in the immediate neighbourhood.* In London, however, the cost of space necessitates lofty buildings, and it may well be that, in a crowded city, the sanitary conditions become rather more favourable as we ascend, and rise out of the lower impurities. It would be an advantage, no doubt, if the out-patient department could be removed to an area distinct from the rest of the hospital. This, however, is impossible, and any plan to be of service must be applicable, not only to the present site, but to the work, as at present carried on, on that site. The main principle of the scheme is, that each pavilion should be a building complete in itself, and that at all times it should be impossible to pass from one pavilion to another, from one storey to another, or from one ward to another, without going into the open corridor. it might be objected that great inconvenience would be thus caused to those who have to visit the wards, but a doctor visiting the wards of an hospital should regard himself rather as walking from house to house than from room to room, and should be clothed accordingly. The building resembles the letter E, the horizontal limbs formed by three pavilions pointing towards the open space in front of the College. Every part of the building is thus made accessible to what pure air there may be on this space. The width between the centre pavilion and those to the north and south of it is from 72 to 80 feet, or nearly the width of Tottenham Court Road. The pavilions are connected at their western extremities by open corridors, through which the wind would be able to blow, and thus the entire area would be thoroughly ventilated. The private wards and residents' rooms occupy a building on the western side of the connecting corridor, while the staircase-turrets are on the eastern side, midway between the pavilions. The position of the connecting corridors and staircases is such, that, in the event of extension along Grafton Street or University Street, they would still be in a convenient position for a larger hospital. The building is 5 stories high, and stands about 63 feet above the pavement—the basement storey 16 feet (9 above the pavement), three stories of wards (13 feet each inclusive of floor) 39 feet, and top storey of 15 feet, exclusive of sloping roof. The basement is lighted by large windows and skylights, and would extend over the whole area, exclusive of the space of 36 by 36 feet, which is appropriated to the back yard. The roof of the basement extending between the pavilions would serve for two recreation courts for patients. The general construction of the basement would resemble, it is thought, that of the large drapers' shops, and would be as light as possible. In it would be found accommodation for casualty rooms, out-patient waiting hall, out-patient consulting rooms, two small casualty wards, containing one bed each, dispensary, dispensary store, and electrical room, in the southern half; board room, secretary's office, residents' dining room, inquest room, steward's and housekeeper's offices, etc., in the northern half; cellars under the Central Pavilion (which would be difficult to light), and baths and heating apparatus, under the residents' building to the west. It is thought that the out-patient department might be ventilated by windows and tubes, and that the foul air might be carried off through special ducts communicating with the furnaces, which would be necessary for the baths and heating apparatus. In this way the nuisance of the out-patient department would be reduced to a minimum. Next as to the three stories devoted to wards. They would be exclusively devoted to patients, and each pavilion would contain three wards. The wards in the north pavilion would be 120 feet long. Those in the centre pavilion 80 feet long, and those in the south pavilion 88 feet. All wards are 25 feet wide. Altogether in this way we should get 21,600 square feet of floor space available for patients; and giving 120 square feet to all patients, children as well as adults, we should get accommodation for 174 patients. In addition to this, there would be 24 beds in private wards, making 198; and if the children and chronic cases were allowed 100 square feet instead of 120, the building would accommodate considerably more than 200 patients. The W.C.'s and sculleries are in slightly projecting turrets at the east end of the pavilions. These turrets meet in an arch at the top of the third floor, and over this arch (in the top storey) the seats in the lecture theatre would be arranged. The W.C.'s and sculleries are purposely made as small as possible. If they be large enough that is sufficient. Excess of cubic space in these apartments is mere waste, adds greatly to the expense of the building, and tends to encourage untidiness and dirt. A kitchen with a large kitchen range, etc., attached to a ward is quite unnecessary, a few gas-jets,

sufficient to cook a chop and heat water or liquid food is all that is required. The top storey is 15 feet in height, exclusive of the roof. Here one would propose to place every thing which may give rise to offensive emanations, and those apartments for which light and air are especially necessary, thus: A. *In North Pavilion*—(i) The dead-house and *post mortem* room (communicating by a special lift with the 'back yard', into which the hearses drive for the removal of the dead); (ii) Registrar's rooms; (iii) Urine laboratory; (iv) Dispensing laboratory and clinical lecture theatre. B. *In Middle Pavilion*—(v) The operating theatre, etc. C. *In South Pavilion*—(vi) The kitchen, etc., with a few servants' bed-rooms. The advantages both for lighting and ventilating possessed by rooms on the top stories is too obvious to call for any remarks. The necessity for a maximum amount of light in *post mortem* rooms, laboratories, and operating theatres, is also obvious. Next as to the building occupying the west side of the area. The bottom of the building would be occupied by the baths and heating apparatus; the first and seeond floors by rooms for 10 residents (2 rooms each); the third and fourth floors by private wards and small wards: and there would be here a partial fifth story, extending over the staircases and west building, affording accommodation for 2 wards for infectious cases. The corridors are 8 feet wide, except in the space between the staircases, where they are 12 feet wide. Here there might be seats, and these wider corridors would serve as rallying points for students waiting to visit the wards with the physicians and surgeons. The corridors are open so as to allow of the free flushing of the area by the west wind, but Louvre boards might be provided as some protection against weather, when necessary. These corridors, it is thought, while serving a most useful purpose, would form an architectural feature of some beauty. The entrances would be (1) for patients, in University Street; (2) for management and students, in Grafton Street. The out-patients' exit would be through a revolving grating in Gower Street. There is no grand entrance, since it takes up room, and serves no useful purpose. The staircases, in separate buildings are 6 feet wide, and in the centre of each is a lift going from the bottom to the top of the building. The double staircases, and the fact that the staircases would be between walls, would render the building a safe one in case of fire. No nurses' rooms have been provided, because it is believed that when a nurse is on duty her proper place is in the ward, and that when she is off duty she is better out of the hospital altogether. They would live, as at present, in a separate house.

Mr. H. K. Stevens, Ampthill, Beds., is present with the celebrated Water from the Flitwick Mineral Springs, of which he is the proprietor. These valuable Mineral Springs, yielding a large supply of tonic and invigorating waters, and rising within 40 miles of London, have only lately been discovered. Mr. Stevens has already brought them under the notice of Professor White, and many medical men in the neighbourhood of London and Bedford. Strongly impregnated with iron, sulphur, magnesia, etc., it has been tried with great success on many long-standing cases of debility, dyspepsia, asthma, and rheumatic gout, and also in a modified form for outward application in skin disease. Carefully attested cases of cure, and medical evidence, will shortly be made public. Mr. Stevens will be glad to send samples to any medical men, chemists, or others interested in the valuable properties of the waters. The following analysis was made by Professor W. White, when it was found to contain in each gallon :—oxide and carbonate of iron, 144.0; sulphate of magnesia and soda, 59.20; carbonate of lime, 11.54; muriate of magnesia (chloride), 15.16; silica, 3.40; carbonate of magnesia, 5.42; carbonate of soda, 0.22; ulmic, malic, and other acids, constituents of vegetable matters, 13.32. The taste of the water may be inferred from the above analysis, which is not at all unpalatable, and in colour it is somewhat of an orange yellow.

The exhibition of Schering's chemicals by Messrs. Zimmermann, their London Agents, is distinguished by one most important novelty, Cinnamic acid. In a patent taken out by J. A. Zimmermann under the 12th July, 1880, for the manufacture of bitter almond oil, benzoic acid, etc., it will be found that a process communicated by Dr. Emil Jacobsen of Berlin is described for the synthetic production of certain aromatic acids and ethers, and the simultaneous production of chlorides of organic acids in the presence of certain metals or their salts. The particulars of that patent will disclose that without the presence of these metals or their salts, the conversion will not take place, except with great difficulty, expense, and waste. Cinnamic acid being one of these products promises a most important history in the arts and medicine; for the former, because of its cardinal mission in the manufacture of artificial indigo; in the latter, on account of its recently discovered powerful and convenient antiseptic properties. Experiments have been made in several hospitals of Berlin, and, as we are informed, most successfully, in the dressing of wounds and surgical operations. These antiseptic properties seem to give it a foremost rank before all others; but as we are told that Professor Langenbeck of Berlin, under whose direction experiments have been made at the Charité Hospital in Berlin, intends to visit this city at the time of the Medical Congress, it is perhaps better to refrain from prematurely entering into particulars. The specimen exhibited shows white transparent silver flakes, and it may be taken as the very first sample brought to this country. That its manufacture is being conducted on a commercial basis seems to indicate the good size of the sample exhibited. The other fine specimens of the Schering's factory products are so well known, except that, like all the products of that factory, they are stamped by the most perfect workmanship in appearance, and are freely inviting a searching examination for the most perfect chemical purity by the facility with which samples are offered to the practical examiner. A peculiar looking and new product is the tannic acid patent crystals. Its golden hair-like appearance gives it a special claim to attention. The soft extract of tannic acid has hitherto been dried by high temperature; this now is a specimen of the soft extract forced through a thin sieve, and the streams proceeding from it have lost all their moisture in the ordinary temperature of the atmosphere. The advantage is obvious, that while at a high temperature it cannot be avoided that part of the tannic acid will decompose into gallic acid, this new process at ordinary low temperatures will not give occasion to such decomposition, and warrant a pure tannic acid in a most convenient form. The advantage is, perhaps, only of importance to the commercial application of the acid, inasmuch as, therapeutically, the acid will only be given in its most perfect form as levissimum, of which a very fine sample is exhibited. The iodoform exhibited certainly shows a brighter colour and more substantial crystal than its rival specimens exhibited.

Messrs. Feltoe and Sons, Albemarle Street, Piccadilly, whose 'Spécialité' Sherry has gained an extensive and well-earned reputation amongst the profession and private families, exhibit this popular sherry and a new 'Spécialité' Lime Juice Cordial. This Cordial is said to be made of the pure juice of limes, with but a little saccharine matter, and contains no sulphuric acid. It is most pleasant to the taste, and quite devoid of that unpleasant flavour too often attaching to lime juice cordials; it is warranted not to become mildewed by exposure to the air. Dr. J. M. Crombie pronounces it to be a safe and excellent antidote for thirst.

Messrs. Savory and Moore also exhibit, as the agents of Delacre's Extract of Beef Company, Limited, their excellent and now well-known preparation, which they have aptly named 'Extractum Carnis'. It appertains to the character of meat broth, from which the water has been evaporated; and it contains all the substances from which meat broth derives its flavour and quality, such as creatin, sarcin, the chlorides, phosphates, etc., and has all the principles of meat, without fibrine, albumen, gelatine, and fat. The salting, smoking, and drying of meat renders it barely wholesome, and certainly not palatable, so that those processes are never likely to be able to compete with that of extraction, and even if fresh meat can eventually be brought to England in low temperature chambers, the importance of 'Extractum Carnis' will in no way be

interfered with, as it is always certain to be an invaluable stimulant for convalescent persons and delicate children, whilst for exploratory expeditions, public establishments, travellers, and sailors, its advantages are never likely to be surpassed. The scene of operations of this company is at Uruguay, South America, and the fine flavour of the cattle from that district and the River Plate is too well known to require further comment here. The Delacre Extract is free from fat and gelatine, and each pound is said to contain all the soluble nutritious constituents of about 36 pounds of best beef, exclusive of bone and fat. Moreover, an important feature in this particular extract is that it is perfectly soluble, and dissolves in hot or cold water, without leaving any insoluble deposits whatever. We have no doubt its several advantages will soon cause it to become as popular here as the best known preparations of a kindred character.

MISCELLANY.

CEREBRAL CIRCULATION.—A French physiologist, M. Gley, has made some delicate experiments on himself with regard to the effects of attention and intellectual work on cerebral circulation. His results confirm those of M. Mosso, and he has added some new observations. He finds that the rhythm of the heart through intellectual work is slightly accelerated; and this increase seems in direct ratio of the intensity of the attention. Thus, the pulse was more frequent when the author studied geometry, with which he had little familiarity, than when he studied philosophy, of which he had a good knowledge. While the heart-rhythm is accelerated, the carotid artery is dilated during cerebral work, and the carotidian pulse becomes dicrotic; but the radial pulse becomes smaller and less ample. The phenomena of congestion observed in the brain persist a certain time after cerebral activity.

THE DEVELOPMENT OF FROGS.—M. Yung has lately been experimenting on frogs, with special regard to the effects of different kinds of food. Fifty tadpoles of one hatching (in the laboratory) were divided into groups in five vessels, and all the physico-chemical conditions of these groups—temperature, light, nature of liquid, etc.—were carefully kept the same, with the one exception of food. The tadpoles in the first vessel had a purely vegetable diet—fresh water algæ, carefully washed. Those in the second had no other food than the gelatinous substance round the frog's egg, which is normally the food of the young animal. This, when no longer procurable, was replaced by liquid albumen of hens' eggs. Those in the third vessel had fish, those in the fourth beef, and those of the fifth coagulated albumen of hens' eggs. The quantity of food was always abundant, and often renewed. The degree of development of the animals was ascertained by measuring the size of a certain number of individuals from each vessel. Differences very soon appeared. It was found that the varieties of food given stand in the following order of decreasingly favourable character—beef, fish, coagulated albumen of hens' eggs, albuminoid substance of frogs' eggs, algæ. As for the last two, they are insufficient to transform a tadpole into a frog. Contrary to a general opinion, a purely albuminous substance, such as white of egg, suffices for the transformation of the tadpole.

AUTOMATIC REGISTRATION OF BODY-TEMPERATURE.—A new form of thermograph, capable of recording automatically the rise and fall of temperature of the body for a given length of time, has been recently invented (we learn from the *Scientific American*) by Dr. Adams, of Colorado Springs. Its principle is, causing the electrical resistance of a fine powder in a tube to vary by means of pressure derived from heat. A vulcanite tube is filled with a fine powder made of plumbago, gas carbon, and silver; these contents abutting at either end against a platinum knob. One knob is attached to a hard rubber bracket, and the other (which imparts the varying pressure), to the free end of a spiral spring, constituting the thermometer proper. This spring is made of two slips of brass and steel, soldered together, the brass occupying the outer side. The more expansible brass, on rise of temperature, causes the free end of the spring with its terminal knob to twist, and so exert increasing pressure on the tube-contents. An electric current is sent through the substance in the tube, entering and leaving by binding posts; and its variations with the varying pressure affect an ingenious electromagnetic mechanism, which produces on a moving surface a sinuous line, the graphic representation of the changes of temperature. The thermometric part of the apparatus is suitably enclosed in a circular, perforated German-silver case, which is secured in proper position in the armpit. Dr. Adams is arranging to obtain on the same strip of paper, not only a curve of the febrile condition of a patient, but also a sphygmographic and respiratory curve, so that the interrelationship of these cardinal symptoms, under varying circumstances, may be easily studied.

A PECULIAR AFRICAN FAMILY.—At a recent meeting of the Royal Irish Academy, Professor O'Reilly read a letter from Dr. Macalister, in which he said:—'Some years ago, my friend, Dr. Minchin, showed me the enclosed photograph, brought home by his son, the late Dr. R. Minchin, and informed me that the man depicted belonged to a family somewhere in West Africa, and that they were famous as executioners, and all the family had the same horns, some bigger and some less. I made a large number of inquiries among my acquaintances, residents of the West of Africa, and have got very little satisfaction, until Dr. Allen on a former visit discovered that these people lived at Akim, and confirmed the particulars brought home by Dr. Minchin. In one other case which I have heard described, the horns are on the malar bone, and projecting externally to the eye. In the photograph sent by Dr. Minchin the horn is maxillary, and is an outgrowth of the front border of the floor of the orbit. I have no African skull showing any approach to this peculiarity of organisation.' In a letter of the 26th of February 1881, written by Dr. Allen, of Bathurst, West Africa, to Dr. Macalister, the writer says:—'You will recollect that Captain Hay (now in Tobago) had stated he had seen these men at Akim. He had one of the men *en route* for England, but he refused to proceed eventually. Captain O'Brien saw this man at Elmina, and he describes him as follows. He was as regards physique, colour, hair, etc., similar to an ordinary native. The horns occupied the malar region—were about 2 in. in length, their direction being, I believe, from his description, upwards, outwards, and forward, nonmovable, and covered with skin.' An inspection of the photograph shows this, that the technical description of 'the horns' on the malar bone, projecting externally to the eye, might be expressed in another form by simply saying that on each side of the nose, and below each eye, there is some sort of an excrescence amounting to a natural deformity, just as much as a round foot is a natural deformity, and that it is rather an abuse of terms to apply the word horn to it. Dr. Frazer said it would be interesting to learn whether the peculiarity described was due to a diseased state, or was of a racial character. Many present remembered a gentleman in Dublin who had a horn protruding from under one eye, which was removed by a surgeon. It was astonishing, first, that in the African there were horns under both eyes; and in the second place, that no surgeon had been found there ready to operate. At home, twenty-four hours would not elapse before an operation was at all events attempted. He hoped the matter would receive most searching and thorough investigation before receiving the *imprimatur* of the Academy. He moved that the communication be referred to the council for publication. Dr. Ball (Astronomer Royal) seconded the proposition. It was highly probable, he said, that, considering so large a sum as £15 had been offered for a skull, a skull would be forthcoming ere long.

The London Medical Record.

GREAT BRITAIN AND IRELAND.

MEDICAL QUALIFICATIONS.

THE number of examining bodies in the United Kingdom which grant degrees and diplomas capable of registration under the Medical Act of 1858 is nineteen. The registrable qualifications obtainable from them are as follows.

1. *Royal College of Physicians of London:* Diplomas of Licentiate, Member, and Fellow.
2. *Royal College of Surgeons of England:* Diplomas of Member and Fellow.
3. *Apothecaries' Society of London:* Licence.
4. *University of Oxford:* Degrees of Bachelor and Doctor of Medicine.
5. *University of Cambridge:* Degrees of Bachelor and Doctor of Medicine, and Master in Surgery.
6. *University of London:* Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master in Surgery.
7. *University of Durham:* Licences in Medicine and in Surgery; Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master in Surgery.
8. *Royal College of Physicians of Edinburgh:* Diplomas of Licentiate, Member, and Fellow.
9. *Royal College of Surgeons of Edinburgh:* Diplomas of Licentiate and Fellow.
10. *Faculty of Physicians and Surgeons of Glasgow:* Diplomas of Licentiate and Fellow.
11. *University of Aberdeen:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
12. *University of Edinburgh:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
13. *University of Glasgow:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
14. *University of St. Andrew's:* Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
15. *King and Queen's College of Physicians in Ireland:* Diplomas of Member, Licentiate, Fellow, and Licentiate in Midwifery.
16. *Royal College of Surgeons of Ireland:* Diplomas of Licentiate and Fellow.
17. *Apothecaries' Hall of Ireland:* Licence.
18. *University of Dublin:* Licences in Medicine and in Surgery; Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor in Surgery, Master in Surgery.
19. *Queen's University in Ireland:* Degrees of Doctor of Medicine and Master in Surgery; and Licence in Surgery.

In addition, the Royal Colleges of Surgeons and the Faculty of Physicians and Surgeons of Glasgow grant licences in Dental Surgery, which are registrable under the Dentists' Act.

Certificates and diplomas in State Medicine and Public Health (which at present are not registrable) are conferred after examination by the Universities of Cambridge, London, Durham, Edinburgh, Glasgow, and Dublin; and by the Royal College of Physicians in Edinburgh.

The following is a general summary of the conditions required on the part of candidates for examination; but, for further details, our readers must consult the regulations issued yearly in the Students' numbers of our contemporaries; or apply to the officers of the respective Universities, Colleges, and Halls.

The regulations of the Examining Bodies are, with very few exceptions, framed in accordance with the Resolutions and Recommendations of the General Medical Council.

Every medical student is required to be registered at the office of the General Medical Council; prior to which he must have passed an examination in subjects of general education. As evidence of this are recognised:—1. The possession of a degree in Arts of an University of the United Kingdom or of the Colonies, or of some University recognised by the Medical Council; 2. A certificate of having passed an examination in subjects of general education conducted by some one or other of the educational bodies, a list of which is given with the 'Recommendations of the General Medical Council'. The Medical Council recommends that no such certificate should be accepted by any of the licensing boards, unless it testify that the candidate has been examined in the following subjects: 1. The English language, including Grammar and Composition; 2. Arithmetic, including Vulgar and Decimal Fractions, and Algebra, including Simple Equations; 3. Geometry—the first two books of Euclid, or the substance thereof; 4. Latin, including Translation and Grammar; 5. One of the following subjects at the option of the candidate: Greek; French; German; Elementary Mechanics of Solids or Fluids, meaning thereby Mechanics, Hydrostatics, Pneumatics, and Hydraulics. [On and after January 1, 1882, the following subjects will be required: 1. English Language, including Grammar and Composition; 2. English History; 3. Modern Geography; 4. Latin, including Translation from the Original, and Grammar; 5. Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including Simple Equations; (*c*) Geometry, including the first two books of Euclid, or the subjects thereof; 6. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics (this subject may be passed either as preliminary, or before, or at the first professional examination); 7. One of the following optional subjects: (*a*) Greek, (*b*) French; (*c*) German; (*d*) Italian; (*e*) Any other modern language; (*f*) Logic; (*g*) Botany; (*h*) Elementary Chemistry.] The preliminary examination having been passed, the student should at once register, as the commencement of the course of professional study is not recognised as dating fifteen days earlier than the date of registration. Forms for registration are supplied by the licensing bodies and at the schools and hospitals.

After passing the preliminary examination, the student may commence his medical education in one of the following ways (according to the regulations of the Licensing body with which he intends to become connected): 1. By attendance for one year on the practice of a provincial hospital or other public institution recognised for this purpose; 2. As the pupil, for one year, of a legally qualified surgeon

holding sufficient public appointments to afford such opportunities of practical instruction as shall be satisfactory to the authorities; 3. By entering at once at a recognised medical school.

The minimum period of medical study required is forty-five months from the date of registration as a student, of which time at least two years and a half must be passed at a recognised medical school. For the degrees of the Universities (except that of London) the candidate is required to spend a portion of the time of medical study at the University which grants the degree, or at a College in connection therewith.

To obtain a degree, diploma, or licence, two examinations at least in professional subjects must be passed; first in the elementary subjects—Chemistry, Anatomy, Physiology, and Materia Medica; and afterwards in the practical subjects. The final examination, which must not be passed until the completion of the fourth year of study, comprises:—1. Pathology (including Morbid Anatomy); 2. Medicine (including Medical Anatomy, Clinical Medicine, and Therapeutics); 3. Surgery (including Surgical Anatomy and Clinical Surgery); 4. Midwifery; 5. Forensic Medicine.

INSTRUCTION IN THE MEDICAL SCHOOLS.

The medical schools in London are those of St. Bartholomew's, Charing Cross, St. George's, Guy's, the London, St. Mary's, the Middlesex, St. Thomas's, and Westminster Hospitals; and the Medical Faculties of King's and University Colleges. To these may be added the London School of Medicine for Women, with which the Royal Free Hospital is connected for the purpose of clinical instruction, and Mr. Thomas Cooke's School of Anatomy and Surgery.

In the provinces in England, there are the medical departments of Queen's College, Birmingham, Owens College, Manchester, and the Medical College of the University of Durham, at Newcastle-on-Tyne; the Medical School affiliated to University College, Bristol: the Medical Faculty of University College, Liverpool; together with medical schools at Leeds and Sheffield. The Universities of Oxford and Cambridge do not profess to give a complete education; in fact, there is no medical school at Oxford; but instruction in many branches is provided for at Cambridge.

In Scotland, the medical schools in which a complete course of professional education is given, are those attached to the Universities of Aberdeen, Edinburgh, and Glasgow, the Extra-Academical School in Edinburgh, and the Anderson's College and the Royal Infirmary School of Medicine in Glasgow.

In Ireland, the medical schools are, the School of Physic in Ireland, the School of the Royal College of Surgeons of Ireland, and the Colleges at Belfast, Cork, and Galway, in connection with the Queen's University in Ireland. There are also several medical schools in Dublin: viz., the Carmichael College of Medicine and Surgery; the Catholic University, and the Ledwich School of Anatomy, Medicine and Surgery.

For information regarding these institutions reference must, as we have already said, be made to the published prospectuses. We shall, however, endeavour to classify a part of the information therein contained under certain heads, viz., Clinical Instruction; Practical Surgery; Special Departments; Practical Physiology; Hospital Appointments; Tutorial Instruction; and Scholarships, Exhibitions, and Prizes.

CLINICAL INSTRUCTION.—At all the hospitals connected with medical schools the physicians and surgeons deliver, at stated intervals, lectures on the cases under their care, in addition to making comments during their visits to the wards or in the operating theatre. In some instances, special provision is also made by the appointment of one or more of the hospital staff as clinical professors or lecturers; and in several of the hospitals a certain number of beds are specially devoted to the purpose of clinical instruction. At Guy's Hospital, forty patients are set aside in the medical wards, and are visited and their cases lectured on by the physicians in the winter, and by the assistant-physicians in the summer session: the surgeons also select cases for clinical instruction. A similar arrangement exists at the London Hospital, where two wards are devoted to the express purpose of teaching clinical medicine; the cases being lectured on by the physicians in the winter, and by the physicians or assistant-physicians in the summer. Special clinical professorships in medicine and surgery, in addition to the ordinary clinical lectures given by the physicians and surgeons, exist at the King's and University College Hospitals. In the former, the professor of clinical medicine is Dr. George Johnson, and the professors of clinical surgery are Mr. John Wood and Mr. Lister. In University College Hospital there are two special chairs, known as the 'Holme Professorships' of Clinical Medicine and Surgery. The Holme professor of clinical medicine is Dr. Wilson Fox, who delivers clinical lectures on Tuesdays and Thursdays on the significance of the general signs of disease, and on the special modes of examination, diagnosis, and treatment of individual cases. There are also two assistant teachers of clinical medicine, Dr. Gowers and Dr. Barlow, who hold classes for instruction in physical examination, the investigation of diseases of the circulatory, respiratory, and nervous systems, the examination of the urine, etc. The Holme professor of clinical surgery, Mr. Christopher Heath, gives a clinical lecture once a week, and also holds a weekly clinical examination on surgical cases in the operating theatre; these examinations, while open to the whole class, being specially intended for the instruction of the senior students. Mr. Marcus Beck and Mr. A. E. Barker are assistant-professors of clinical surgery. A special course of lectures on Clinical Surgery has been established at St. Thomas's Hospital, the lecturer being Mr. John Croft. In Cambridge, clinical instruction in medicine and surgery is given at Addenbrooke's Hospital throughout the year. At Leeds, clinical classes meet at appointed hours to receive instruction in the wards from the physicians. In the Liverpool Royal Infirmary, Dr. Glynn, one of the physicians, gives, once a week during the winter, practical instruction in clinical medicine and the methods of physical diagnosis. In the Owens College, Manchester, there is a special professorship of clinical medicine, held by Dr. William Roberts. A medical and a surgical clinical lecture are given every week in the Manchester Royal Infirmary. Medical and Surgical Ward Classes are formed by the members of the Infirmary staff at each of the trimestral periods, commencing with October, January, and May. In the Infirmaries of Aberdeen, Edinburgh, and Glasgow, clinical lectures on medi-

cine, surgery, and midwifery are delivered by the medical staff of each institution. The Universities of Edinburgh and Glasgow have special professors of Clinical Medicine and Surgery. In the medical schools of Ireland, clinical courses are given through the session.

In connection with the subject of Clinical Instruction, reference must be made to means provided at several hospitals for the special purpose of training the students in the observation of cases. At the Charing Cross Hospital, practical instruction in auscultation, in health and in disease, is given once a week by Dr. R. Smith; while Dr. Houghton instructs in case-taking. In Guy's Hospital, the ward clerks (of whom 150 or more are appointed during the year) are assisted in the examination of cases and the preparation of reports by the medical and surgical registrars, who also instruct them in physical diagnosis and in chemical and microscopical investigation. Similarly, at the London Hospital, the clinical clerks and dressers are assisted by the house-physicians and house-surgeons. At several of the medical schools there are medical tutors, who instruct the students in the physical examination and systematic description of cases. The provision made at University College Hospital has been referred to above. Classes for medical demonstration are held in the Manchester Royal Infirmary twice weekly during the summer by two of the medical officers; in which classes instruction is given in anatomy as applied to medicine, in physical and chemical examination, etc. In the University of Edinburgh, a class for instruction in clinical medicine is held in the wards of the Royal Infirmary by the clinical tutor.

Practical Surgery.—At most of the schools, special provision is made for instruction in this important branch of medical education. The courses embrace such subjects as—the application of anatomy to surgery on the living person or the dead body; the methods of proceeding, and the manipulations necessary, in order to detect the effects of diseases and accidents; the performance of operations on the dead body; the use of surgical apparatus; the examination of diseased structures, as illustrated by preparations and recent specimens. The course of practical instruction is generally distinct from that of systematic surgery, and is in many instances given in the summer session. In the Liverpool School of Medicine, the lectures on Systematic Surgery are given thrice weekly, and there is a concurrent course of Practical Surgery twice weekly; besides which, a course of Operative Surgery is given in the summer.

Special Departments.—Due provision is made for instruction in *Midwifery*, so as to enable students to meet the requirements of the examining bodies; but we do not call to mind any arrangement in any of the schools demanding special notice.

Ophthalmic Surgery is taught by lectures and observation of cases at all the London schools; each hospital receiving ophthalmic patients except the Charing Cross, the pupils of which are admitted to the practice of the Royal Westminster Ophthalmic Hospital. As far as can be gathered from the prospectuses, the material available for the practical teaching of this subject (as far as regards in-patients) is as follows: St. Bartholomew's Hospital, 26 beds; Charing Cross (Royal Westminster Ophthalmic Hospital), 50 beds; Guy's Hospital, 50 beds (also about 3,000 out-patients, and an average of more than 1800 operations); London Hospital, 12 beds. The other hospitals have beds for ophthalmic cases, but the number is not stated. Among the provincial schools, those of the Universities and at Newcastle-on-Tyne are the only ones in which there is no special department for teaching ophthalmic surgery. In the Universities of Aberdeen and Glasgow instruction in ophthalmic surgery is given; and the students are admitted to see the practice of ophthalmic institutions in those cities. In the Extra-academical School of Edinburgh, and in Anderson's College and the Royal Infirmary School of Medicine in Glasgow, courses of lectures on the subject are given. In Ireland, provision is made for the teaching of ophthalmic surgery in most of the medical schools in Dublin.

Aural Surgery is taught as a special branch at all the London medical schools, and at the Leeds School of Medicine and the Bristol and Manchester Royal Infirmaries among the provincial schools; also in the Extra-academical School in Edinburgh, and in Glasgow Royal Infirmary School of Medicine.

Diseases of the Throat.—Special instruction in the diagnosis and treatment of diseases of the throat and larynx, and the use of the laryngoscope, is given at St. Bartholomew's Hospital by Mr. Butlin; at the Charing Cross Hospital by Mr. J. H. Morgan; at St. George's Hospital by Dr. Whipham; at King's College Hospital by Dr. Baxter; at the London Hospital by Dr. Morell Mackenzie, who delivers a course of lectures on the subject; at St. Mary's Hospital by Mr. Norton; at the Middlesex Hospital by Mr. Hensman (with Diseases of the Ear); at University College Hospital by Dr. Poore; at the Westminster Hospital by Dr. De Havilland Hall; at the Bristol Royal Infirmary by Mr. Harsant; at the Manchester Royal Infirmary by Dr. H. Simpson; and in the Glasgow Royal Infirmary by Dr. E. Watson.

Diseases of the Skin.—For the teaching of this important department of medicine, special provision is made in all the London Hospitals, in the Bristol General Hospital, and in the Manchester Royal Infirmary. Demonstrations of cases, and clinical lectures, are given at stated intervals, generally once a week. In University College Hospital, Dr. Radcliffe Crocker, the physician in this department, gives clinical lectures on diseases of the skin once a fortnight. A course of lectures is given in the Edinburgh Extra-academical School. In Dublin, a course of instruction on diseases of the skin is given at the Adelaide Hospital.

Orthopædic Surgery is taught at St. Bartholomew's Hospital by Mr. Howard Marsh; at St. George's Hospital by Mr. W. H. Bennett; and at the Westminster Hospital by Mr. Richard Davy. Mr. Hardie gives instruction on this subject at the Manchester Royal Infirmary.

Mental Diseases. — Lectures on Psychological Medicine are delivered as a separate course in most of the London schools. Special arrangements for clinical instruction are made in several instances; thus the students of St. Bartholomew's Hospital have access to a large public asylum; those of Guy's Hospital are admitted to Bethlem Hospital, and those of the London Hospital to Bethnal House. Two students of the London Schools, qualified to practise, are appointed for six months as resident clinical assistants in Bethlem Hospital. At the Leeds School of Medicine, the students attend the West Riding Lunatic Asylum at Wakefield, where Dr. Major, the Medical Director, gives clinical lectures in addition to a course of systematic lectures at the school. In

Manchester, a course of clinical lectures on mental diseases is given to senior students of Owens College by Mr. G. W. Mould, at the Asylum in Cheadle. At the Newcastle-on-Tyne College, instruction in psychological medicine is given by Mr. Wickham, medical superintendent of Coxlodge Asylum. In the University of Edinburgh, Dr. Clouston gives a course of Medical Psychology and Mental Diseases, with practical instruction at the Morningside Asylum. In the Extra-academical School, a similar course is delivered by Dr. Batty Tuke. In the Glasgow Royal Infirmary School of Medicine, a course of lectures on Mental Diseases is given by Dr. A. Robertson, in the City Parochial Asylum. In Dublin, special courses of lectures on mental diseases are given in the Richmond, Whitworth, and Hardwicke Hospitals, adjoining which is a large asylum containing over 1,000 patients. The lectures on psychological medicine are mostly delivered during the summer session.

Public Health.—Special courses of lectures on this subject are given at St. Bartholomew's, Charing Cross, Guy's, the Middlesex, and St. Thomas's Hospitals, and at King's College. At St. George's Hospital, it is included in the Course of Medicine; and at the London, St. Mary's, and Westminster Hospitals, in that on Forensic Medicine. In University College, besides the lectures, instruction in the chemical and microscopic examination of air, water, and food, is given in the hygienic laboratory. In most of the provincial schools, the subject is included in the lectures on Forensic Medicine. In Owens College, Manchester, lectures on Hygiene are delivered by Dr. Ransome. In the Sheffield Medical School, a course of lectures is given by Dr. Drew, and in the Newcastle College of Medicine by Dr. Armstrong. In Scotland, also, the instruction in Public Health is given in connection with that on Medical Jurisprudence. In Dublin, there is a professorship of Hygiene in the school of the Royal College of Surgeons.

PRACTICAL PHYSIOLOGY.—This subject is taught in most of the schools: but more elaborate provision is made in some cases than in others.

At *St. Bartholomew's Hospital*, the course is conducted by a demonstrator and two assistant demonstrators under the superintendence of the lecturers on Physiology and Chemistry. Dr. Klein gives a course of lectures on General Histology, with demonstrations, which form part of the course on General Anatomy and Physiology.

At *Guy's Hospital*, Mr. Golding-Bird gives a course of Histological demonstrations of the elementary tissues and the chief organs of the body, with their behaviour and re-agents, as studied with the microscope. The course includes about thirty-five demonstrations, and is gone through twice in the winter session. A laboratory class in Practical Physiology, intended for advanced students, is held by Dr. Pye-Smith in the summer.

At *University College*, instruction in Practical Physiology is given by Dr. Burdon Sanderson (Jodrell Professor of Physiology) and Mr. Schäfer (Assistant Professor of Physiology). The course of Practical Physiology and Histology consists of practical lessons in Histology and the use of the Microscope, and in Chemical Physiology. Practical demonstrations relating to the mechanism of circulation and respiration, and the vital properties of the tissues, are given in the laboratory.—A course of lectures on Embryology will be given during the winter session by the Assistant Professor of Physiology. In addition, a series of practical lessons on development will be given to those who have been through the course of Practical Histology.—Persons desirous of engaging in original investigation in Physiology and Histology may be admitted to the laboratory as workers on the nomination of the Jodrell Professor. An advanced course of practical Physiology, specially adapted to meet the requirements of candidates for the first M.B. honours and the second B.Sc. Examinations of the University of London, will be given after Christmas.

At the *Westminster Hospital*, a course of lectures and demonstrations will be given by Mr. North. The course will consist of three parts:—1. Thirty lectures and demonstrations in the Histology of the Simple Normal Tissues, delivered during May, June, and July; 2. Thirty lectures and demonstrations on the Histology of the Normal Organs and Viscera, delivered in October, November, and December; 3. A course of about twelve demonstrations on Physiological Chemistry.

In *Owens College, Manchester*, a very complete course of practical Physiology is conducted during the year by Dr. Arthur Gamgee, the Brackenbury Professor of Physiology. The class meets daily, except Saturdays, for systematic work in Practical Histology and Physiological Chemistry, and for demonstrations in Experimental Physiology. The Physiological Laboratory is open daily during the winter and summer sessions.

Practical Physiology is taught in the University of Edinburgh, by Professor Rutherford; in that of Aberdeen, by Professor Stirling; and in that of Glasgow, by Professor Fleming. Courses are also given in the Edinburgh Extra-Academical School, and in the Glasgow Royal Infirmary School of Medicine and in Anderson's College.

HOSPITAL APPOINTMENTS.—Numerous appointments at the hospitals are open to the diligent student, without payment (except in the few cases hereinafter noticed) of any fee. For the resident appointments, a qualification to practise is required; and, in some instances, a salary is paid in addition to the provision of rooms and board.

At *St. Bartholomew's Hospital*, four house-physicians and four house-surgeons are appointed annually. A resident midwifery assistant is appointed every six months; an ophthalmic house-surgeon is also appointed for six months, and may be re-elected. An assistant-chloroformist is appointed annually. Each of these officers is provided with rooms by the hospital authorities, and receives an annual salary of £25. Clinical clerks to the medical in-patients, and to the physician-accoucheur, also clerks and dressers for the out-patient and special departments, are chosen from among the students. Thirty-two dressers for the surgical in-patients and the surgical casualty department are selected each year; and other in-patient dresserships may be obtained on payment of £10 10s. for three months, or £16 16s. for six months.

At *Charing Cross Hospital*, a medical and a surgical registrar are appointed, each with a salary of £40 a year. A resident medical officer and a resident surgical officer are selected by competitive examination every six months from candidates qualified to practise. A resident obstetrical officer, assistant medical officer, and assistant surgical officer, are appointed every six months, after examination, preference in each case being given to a legally

qualified man. The clinical clerks—three to each physician and two to each assistant-physician, and the dressers—three to each surgeon and assistant-surgeon, and also two clinical clerks to the physician-accoucheur, are appointed for periods of four months. Pathological assistants, who assist at the *post mortem* examinations, are appointed each month for four months.

At *St. George's Hospital*, house-physicians and house-surgeons are appointed half-yearly from among the perpetual pupils. The appointments are held for twelve months, with board and residence in the hospital free of expense. Each pays a deposit of 50 guineas, which is returned if the duties of his office have been satisfactorily performed. A curator of the Pathological Museum and a medical and a surgical registrar, each with a salary of £50; an ophthalmic registrar and a microscopic pathologist, each with a salary of £25; and an obstetric assistant, with board, residence, and a salary of £100, are appointed annually. An assistant house-physician, an assistant house-surgeon, an ophthalmic assistant, two assistant medical registrars, and an assistant surgical registrar, are appointed every six months. Clinical clerks and dressers are also appointed.

At *Guy's Hospital*, there are appointed during the year 6 senior and 6 junior house-physicians, 6 senior and 6 junior house-surgeons, 12 senior and 12 junior obstetric residents, 24 surgeons' dressers, 18 clinical assistants, 18 dressers in the eye wards, 24 *post mortem* clerks, 24 obstetric out-patient clerks, 32 assistant physicians' clerks, 12 dental surgeons' dressers, 12 aural surgeons' dressers, 64 medical clinical clerks, 72 or more assistant-surgeons' dressers and dressers in the surgery, 12 obstetric ward clerks, 80 surgical clinical clerks, 32 assistant-surgeons' clerks, 60 extern obstetric assistants, and clerks in the room for applying electricity. All students have opportunities of becoming clinical ward clerks to the physicians and surgeons, as well as dressers to the assistant-surgeons and dressers in the surgery; and the diligence with which they perform the duties of these offices is an important test of their fitness for the higher posts.

At *King's College Hospital*, a physician's assistant, house-surgeons, a physician-accoucheur's assistant, clinical clerks, and dressers, are chosen by examination from matriculated students of the College who are pupils at the hospital.

At the *London Hospital*, every student is expected to act as clinical clerk to the medical out-patients for six weeks in his second year, and to dress for three months in the surgical out-patient department; also to act as *post mortem* clerk for three months. The following appointments are also made: five house-physicians (qualified for registration) every six months; clinical clerks (open to all full pupils) every three months; a resident accoucheur (qualified) every six months; clinical obstetric clerks every three months in the in-patient, and every six weeks in the out-patient; four house-surgeons, for six months (each being provided with board and residence); surgical dressers every three months, three clinical assistants (each with a salary at the rate of £80 *per annum*), a medical and a surgical registrar (each with £100 *per annum*), a dental assistant, ophthalmic and aural dressers, and *post mortem* clerks.

At *St. Mary's Hospital*, three resident medical officers are appointed for twelve months, and a resident obstetric officer for six months. They all reside in the hospital free of expense. All students are required to perform the duties of clinical clerk and dresser for six months after passing the primary examination. Students of the third year are expected to assist in the out-patient department for three months. A medical registrar is appointed, with a salary of £100 a year.

At the *Middlesex Hospital*, two house-surgeons, three resident physicians' assistants, and a resident obstetric physician's assistant are appointed by competitive examination. They pay, on appointment, fees varying from ten to twenty guineas, according to circumstances. The appointments of clinical clerks and dressers are so arranged that every student may at some period of his attendance on hospital practice hold both a clerkship and a dressership. Obstetric physician's clerks and ophthalmic dressers are appointed.

At *St. Thomas's Hospital*, two house-physicians and two assistant house-physicians, two house-surgeons, an assistant house-surgeon, and a resident accoucheur, are selected every six months from students who have obtained professional diplomas. An ophthalmic clinical assistant is also appointed with a salary for six months. Clinical clerks and dressers to in-patients are selected from pupils, to the number in all of at least 100 each year; and clinical clerks and dressers to out-patients to the number of 80 or 100 each year. Two registrars, at an annual salary of £100 each, are appointed each year. There are also numerous minor appointments of anatomical assistants, prosectors, obstetric clerk, etc., open to all students.

In *University College Hospital*, eight house physicians, six house-surgeons, and four obstetric assistants, are selected annually by examination from among the senior students. They reside in the hospital, paying for their board. Physicians' clerks, surgeons' dressers, surgical ward clerks, and ophthalmic surgeon's assistants, are selected from among the pupils who are also students of the College.

At the *Westminster Hospital*, a curator of the museum and pathologist, with a salary of £52 10s., and a medical and a surgical registrar, each with a salary of £40, are appointed annually. Two house-physicians, house-surgeon, and a resident obstetric assistant, are appointed by examination for six months; they are provided with board and rooms in the hospital, and the senior house-physician, as chloroformist, receives an additional honorarium of £21. An assistant house-surgeon is appointed by examination. Clinical assistants to the assistant-physicians and assistant-surgeons and to the officers in charge of special departments are appointed from among the most advanced students of the fourth year. Every student must act as out-patient dresser during three months in his first year, and afterwards hold the office of in-patient dresser and clinical clerk during a period of three months each.

In the *Birmingham General Hospital*, a resident medical and a resident surgical assistant, and two resident dressers, are appointed, each for six months.

At the *Queen's Hospital, Birmingham*, a resident obstetric assistant is appointed every six months and a resident dresser every three months.

At the *Bristol Royal Infirmary*, students are appointed to clinical clerkships in their third and fourth years. Surgeons' dressers are appointed after the first year of study, and, when sufficiently qualified, reside in the hospital in weekly rotation, and act under the supervision of the house-surgeon. The dressers and clinical clerks pay fees in addition to

those for hospital practice. A pathological clerk is appointed every four months.

At the *Bristol General Hospital*, clinical clerks, dressers, and obstetric clerks are appointed. The clinical clerks and dressers pay each an extra fee of £5 5s. for six months; and the obstetric clerks £3 3s. for three months. Resident pupils are received, and pay £100 for the first year, and £60 for each subsequent year; or £260 for five years.

In the *Leeds General Infirmary*, all students must hold the office of clinical clerk and dresser. A house-physician and house-surgeon are elected from time to time. There are four resident assistants; two are elected every six months, and hold office for one year.

At the *Liverpool Royal Infirmary*, two house-physicians and three house-surgeons are selected (by competitive examination if necessary) from pupils of the school who have obtained a legal qualification to practise; they hold office for six months. Three clinical clerks are appointed to each physician, and three or more dressers to each surgeon, and two clerks to the wards for special diseases of women; they hold office for three months. *Post mortem* clerks are appointed for periods of six weeks. This appointment is required to be held by every student.

At the *Manchester Royal Infirmary*, a registrar, a pathological registrar, for two years, are appointed annually. The following resident medical officers are appointed: Infirmary, for two years, salary, £250 *per annum;* at Cheadle Lunatic Asylum, for one year, £150 *per annum;* at Monsall Fever Hospital, for one year, £200 *per annum.* A resident surgical officer is appointed annually, and receives £150. Eight house-surgeons, and four house-physicians are appointed in each year. An assistant to the resident medical officer at Monsall, and to those at Cheadle, are appointed every six months. House-surgeons must possess registrable qualifications. Two or more clinical clerks are appointed to each physician and assistant-physician, and two or more dressers to each surgeon and assistant-surgeon; two clerks are also appointed to the pathological registrar and to each of the assistant medical officers. They hold these for three months. Accident-ward dressers are also appointed monthly, for two months.

In the *Newcastle-on-Tyne Infirmary*, four resident dressers are appointed twice a year; each pays a fee of £10 10s. for six months. Two assistants to the pathologist are appointed in May and December.

In the *Edinburgh Royal Infirmary*, four resident physicians and four resident surgeons are appointed for six months. Clinical clerks are also appointed; and each surgeon appoints several dressers for six months. There are also assistants in the pathological department.

In the *Glasgow Royal Infirmary*, five physicians' and five surgeons' assistants are boarded and lodged in the Hospital at the rate of £25 *per annum.* The appointments can be held for twelve months, six in the medical and six in the surgical wards. These appointments are open to students who have passed all their examinations except the last, or to qualified gentlemen. There are also numerous clerkships and dresserships.

TUTORIAL INSTRUCTION.—In addition to the ordinary courses of lectures and hospital practice, and practical instruction, many of the medical schools have an officer whose special duty it is to direct the pupils in their studies, and to hold classes for the guidance of those who are about to present themselves for examination before the licensing boards.

SCHOLARSHIPS, EXHIBITIONS, AND PRIZES.—In addition to the rewards for diligence in professional study, many of the medical schools offer yearly one or more scholarships, usually in general literature, and in some instances in science. The competition is open to gentlemen about to commence their hospital studies; and the successful candidate is expected to enter as a pupil of the school in which the examination has been passed. In the examination in general literature, the subjects are usually those of preliminary education as defined by the General Medical Council, or of the Matriculation Examination of the University of London. In the Science scholarships, the usual subjects are Chemistry, Botany, and Zoology. The yearly value of the scholarships and exhibitions varies from £100 to £10.

There are also many scholarships and exhibitions, varying in value from £100 to £20, open to students during their period of professional study, or (as at St. George's Hospital) within a limited time after they have passed their final examinations for licences to practise. These exhibitions are in some cases (as at St. Bartholomew's and the London Hospitals) awarded after examination in subjects of preliminary education; but in most of the schools they are given after examination in groups of subjects of professional education, elementary or practical.

Special rewards are also offered in many of the schools for evidence of proficiency in clinical observation.

For further information respecting the scholarships and exhibitions, and regarding the class prizes, as well as for many details which we are obliged to omit, our readers must consult the prospectuses of the schools and our advertising columns.

FRANCE.

GRADUATION IN MEDICINE.

THE Degree of Doctor in Medicine of the University of France is conferred by the Faculties of Paris, Montpellier, Nancy, Bordeaux, Lille, and Lyons, under regulations laid down by the Government.

1. The studies necessary for obtaining the degree last four years; during the first three years they may be carried on either in the Faculties, in the *Ecoles de plein exercice*, or in the preparatory schools of medicine and pharmacy. The studies of the fourth year can only be made in a Faculty or in an *Ecole de plein exercice.*

2. Candidates must produce, when they take the first inscription, the diploma of Bachelor of Sciences, limited as regards the mathematical part. They must undergo five examinations and defend a thesis. The second, third, and fifth examinations are each divided into two parts.

3. The five examinations are as follow. *First Examination:* Physics, chemistry, medical natural history. *Second Examination:* First part, anatomy and histology; second part, physiology. *Third Examination:* First part, external pathology (surgery), midwifery, operative surgery; second part, internal pathology (medicine), general pathology. *Fourth Examination:* Hygiene, legal medicine, therapeutics, materia medica, and pharmacology. *Fifth Exam-*

ination: First part, clinical surgery and obstetrics; second part, clinical medicine, practical demonstrations in pathological anatomy; and a thesis on a subject chosen by the candidate.

4. The first examination takes place after the fourth inscription and before the fifth; the first part of the second examination, after the tenth inscription, and before the twelfth; and the second part after the twelfth inscription and before the fourteenth. The third examination cannot be passed until the end of the sixth *trimestre* of study. Any candidate who does not pass the first examination in November, at the latest, will be put back to the end of the scholastic year, and will not be permitted to take out any inscription during the course of that year.

3. Candidates for the doctorate, pupils of *écoles de plein exercice* or of the preparatory schools, are examined by the Faculties at the periods fixed in the preceding article. They may, however, defer the first examination until after the twelfth inscription. In that case they must pass the second examination before the thirteenth inscription, and, from the commencement of the second year of study, are subjected to interrogations at the end of each six months, the results of which are transmitted to the Faculties, to be taken into account in the examinations for the doctorate.

6. The inscriptions for *officier de santé* cannot be converted into inscriptions for the doctorate, in the case of pupils actually studying; but this conversion may be permitted in the case of *officiers de santé* who have practised medicine for at least two years.

7. Practical work in the laboratory, dissection, and residence near the hospitals, are obligatory. Each annual period of laboratory work and dissection comprises six months' course, or *semestre.* Residence near the hospitals must not continue less than two years.

8. The fees to be paid by candidates for the degree of Doctor in Medicine are fixed as follows.

Sixteen inscriptions at 32 *francs* 50 *centimes* each	520	*francs.*
Eight examinations at 30 *francs* ...	240	„
Eight certificates of proficiency at 25 *francs*	200	„
Expenses of materials for practical study, first year, 60 *francs;* second and third years, each 40 *francs;* fourth year, 20 *francs*	160	„
Thesis	100	„
Certificate of proficiency	40	„
Diploma	100	„
Total	1,360	„

9. Every candidate, who, without an excuse admitted by the jury, does not answer when his name is called, on the day of which notice has been given to him, is sent back for three months, and forfeits the fees which he has paid.

10. The fees paid by the pupils of the Faculties go to the public treasury. The fees paid for inscriptions and for practical work by the pupils of the *écoles de plein exercice* and the preparatory schools go to the municipal treasuries.

A foreigner holding medical qualifications to practise medicine, if desirous of obtaining the degree of the University of France, must show to the Minister of Public Instruction his diploma, and the certificates of the course of study which he has undergone in his own University or Medical School. The Minister, if satisfied, will authorise the candidate to present himself for the five final examinations. These are conducted in the French language. The fees are as follows: each examination 90 *francs*=450 *francs;* thesis, 240 *francs;* fifteen inscriptions, 520 *francs;* three *examens de fin d'année*, 90 *francs;* diplomas of *bachelier ès lettres et ès sciences*, 100 *francs;* in all, 1,400 *francs.* The candidate has to pay all the fees, although exempted from the necessity of passing the preliminary examinations, and those for the *bachelier ès lettres et ès sciences.*

MEDICAL EDUCATION.

Medical Education in France is under the control of the State, and is given in the Faculties of Medicine and Pharmacy, the Écoles de Plein Exercice, and the Preparatory Schools of Medicine and Pharmacy.

The Faculties are six in number: three—those of Paris, Montpellier, and Nancy, are composed of two distinct schools of Medicine and Pharmacy; the others, at Bordeaux, Lille, and Lyons, are called mixed Faculties of Medicine and Pharmacy. They confer, besides the same diplomas and certificates as the other schools, the diplomas of doctor in medicine and *pharmacien* and midwife of the first class.

There are two *écoles de plein exercice*, viz., at Nantes and at Marseilles. They are entitled to give the same certificates as the preparatory schools; but candidates for the doctorate may take out sixteen inscriptions in them.

The Preparatory Schools are entitled to give diplomas or certificates of *Officier de santé and Pharmacien,* herbalist, or midwife, of the second class. Candidates for the doctorate can study in them three years, and take out twelve inscriptions. There are preparatory schools at Algiers, Amiens, Angers, Arras, Caen, Clermont, Ferrand, Dijon, Grenoble, Limoges, Poitiers, Reims, Rennes, Rouen, Toulouse, and Tours.

Faculty of Medicine in Paris.

The School of Medicine in Paris is open to all who wish to attend the courses and take degrees. Great facilities are afforded to British and foreign students for the prosecution of their studies, all lectures being given gratuitously, and no payment being required for hospital attendance. For dissections, however, a payment of 30 *francs* or more is expected from each student.

The medical sessions begin for winter on October 15th, and for summer on April 15th of each year.

The instruction in the Faculty of Medicine in Paris is given by the following professors: M. Sappey, Anatomy; M. Robin, Histology; M. Béclard and M. Richet (*agrégé*), Physiology; M. Wurtz and M. Henninger (*agrégé*), Medical Chemistry; M. Baillon and M. de Lanessan (*agrégé*) Natural History; M. Gavarret and M. Gariel, Medical Physics; M. Regnauld, Pharmacology; M. Jaccoud, M. Peter, and M. Dieulafoy (*agrége*), Internal Pathology or Medicine; M. Trélat and M. Berger (*agrégé*), External Pathology or Surgery; M. Guyon, Surgical Pathology; M. Le Fort, Practical Surgery; M. Hayem, Materia Medica and Therapeutics; M. Charcot and M. Ollivier (*agrégé*), Pathological Anatomy; M. Pajot and M. Pinard (*agrégé*), Midwifery; M. Bouchardat, Hygiene; M. Brouardel, Forensic Medicine; M. Bouchard, General Pathology and Therapeutics; M. Vulpian, Comparative and Experimental Pathology; MM. G. Sée, Lasègue,

Mardy, Potain, Clinical Medicine; MM. Gosselin, Richet, Verneuil, Trélat, Clinical Surgery; M. Depaul, Clinical Midwifery; M. Panas, Clinical Ophthalmology; M. Parrot, Diseases of Children; M. Laboulbène, History of Medicine; M. Ball, Diseases of the Mind and Nervous System. Supplementary courses are also given on Diseases of the Skin, Diseases of Children, Venereal Diseases (M. Fournier).

The Faculty of Medicine possesses laboratories for Anatomy (Professor Sappey), Operative Surgery (Professor Le Fort), Physics (Professor Gavarret), Chemistry (Professor Wurtz), Biological Chemistry (Professor Wurtz), Practical Forensic Medicine (Professor Brouardel), Botany (Professor Baillon), and Teratology (Director, M. Dareste), Normal Histology (Director, M. Ch. Robin), Physiology (Professor Béclard), Pathological Anatomy (Professor Charcot), Experimental and Comparative Pathology (Professor Vulpian), Therapeutics (Professor Hayem), Pharmacology (Professor Regnauld).

In consequence of limited accommodation and restricted pecuniary means, these laboratories are, as a rule, incapable of being so useful as such institutions might be expected to be. It is found necessary to limit their use to medical men and to students who are pursuing researches for some definite purpose, such as the preparation of their theses. No payment is required; the demonstrators (*préparateurs*) aid with advice; the apparatus is at the disposal of the workers in the laboratories, but they generally have to pay for any animals or other objects which they may require.

Every student is required to go through courses of practical instruction (*travaux pratiques*) as follows: first year, physics, chemistry, and natural history; second and third years, anatomy, physiology, and histology; fourth year, practical surgery and pathological anatomy.

Attached to the Faculty of Medicine are the Botanical Gardens and Museum of Natural History; the Orfila Museum of Anatomy and Zoology, at the École de Médecine; the Dupuytren Museum of Pathological Anatomy, in the École Pratique; and the Library.

The prizes of the Faculty of Medicine are the following. The Corvisart prize, a gold medal of the value of 400 *francs* (£16), is offered for competition to all pupils of the Faculty who have also entered to one of the internal clinics. The subject is some question in medicine, the answer to which must be derived exclusively from the facts observed in hospital practice. The Monthyon prize, consisting of 700 *francs* (£28), is awarded to the author of the best essay on the prevalent diseases of the preceding year, their characters, symptoms, and treatment. The Barbier prize of 2,000 *francs* (£80) is offered annually to the inventor of an operation, or of instruments, bandages, etc., of general utility and superior to anything of the kind that has been already in use. The Chateauvillard prize, also of 2,000 *francs*, is awarded yearly to the author of the best work on the medical sciences, printed between January 1 and December 31 in the preceding year. The works sent for competition must be in French. Graduation theses are admitted. An annual sum of 1,000 *francs* (£40) is awarded, under the will of the late Baron de Frémont, to a meritorious but poor student. An annual revenue of 3,000 *francs*, bequeathed by Madame de Barkow, is applied to a similar purpose in the superior educational establishments in Paris. The Lacaze prize of 10,000 *francs* (£400) is offered biennially for the best essay on phthisis or on typhoid fever—the subjects being taken alternately. After the examination of the theses, the Faculty names to the Minister of Public Instruction the candidates worthy of special distinction, in the form of silver medals, bronze medals, and honourable mention. Bursaries of the value of 1,200 *francs* are awarded after competition. Each bursary is tenable for one year; and the holder, if desirous of its renewal, must again compete. Candidates must be natives of France, at least eighteen years of age.

The College of France.

In this institution, the following courses of instruction on sciences allied to medicine are given, viz., Experimental Medicine, by Dr. Brown-Séquard; General Anatomy, by M. Ranvier; Natural History of Organised Bodies, by M. Marey; Comparative Embryogeny, by M. Balbiani; Organic Chemistry, by M. Berthelot; Mineral Chemistry, by M. Schutzenberger; Physics, by M. Mascart; Natural History of Inorganic Bodies, by M. Fouqué; General Physics, by M. Bertrand. The Histological Laboratory is under the direction of M. Ranvier and M. Malassez, and is specially intended for the use of persons desirous of making original researches. The Physiological Laboratory, directed by Professor Marey and M. François Franck, is open to persons who enter their names for the purpose with the secretary of the Faculty of Sciences, and who have a sufficient knowledge of physiology to enable them to undertake experimental research. The researches may have reference to any department of physiology; but special attention is paid in this laboratory to the phenomena of motion, and their registration by suitable apparatus.

Free Medical Instruction.

In addition to the professors in the Faculty of Medicine, there are a number of lecturers whose instruction is recognised. Among them are, MM. Lenoir and Fort, for Anatomy; M. François Franck, for Physiology and Pathology; M. Dareste, for Embryology and Teratogeny; Dr. Latteux, for Histology and the Use of the Microscope; MM. Moutard-Martin, Hanot, Barié, Cuffer, du Castel, Lorey, and Muselier, for Internal Pathology; MM. Duret and Schwartz, for External Pathology; MM. Ribemont, Champetier de Ribes, and Porak, for Midwifery; MM. de Sinéty, Chéron, and Berrut, for Diseases of Women; M.M. Abadie, Carré, Coursserant, Desmarres, Fano, Galezowski, Meyer, Parinaud, and Gorecki, for Diseases of the Eyes; MM. Fauvel and Cadier, for Laryngoscopy; M. Gellé, for Diseases of the Ears; MM. Reliquet, Mallez, Picard, Debuc, and Langlebert, for Diseases of the Urinary Passages; MM. Apostoli and Tripier, for Medical Electricity.

The Hospitals of Paris.

Pupils of the Faculty of Medicine in Paris attend, without payment, the practice of any of the hospitals which they may select. The visits of the physicians and surgeons are generally made at an early hour—8 or 9 A.M. The following is a list of these institutions:

Hôtel Dieu, Parvis Nôtre Dame. — 530 beds. *Physicians:* Drs. G. Sée, Hérard, Oulmont, Frémy, Moutard-Martin, and Empis; *Surgeons:* MM. Richet, Cusco, and Panas (Diseases of the Eye). The hospital possesses laboratories for histology, chemistry, and physiology; also a library for the use of the *internes*.

Hôpital des Cliniques, 13, Rue Monsieur-le-Prince;

for Midwifery, 89, Rue d'Assas.—128 beds. *Physician Accoucheur:* Dr. Depaul; *Superintendent of Clinic:* M. Ribemont. Students are only admitted to the obstetric department of this hospital when provided with a card, which is obtained from the Secretary of the Faculty of Medicine, after passing the second examination for the doctorate.

Hôpital de la Charité, 47, Rue Jacob.—504 beds. *Professor of Clinical Medicine:* M. Hardy; *Professor of Clinical Surgery*, M. Gosselin; *Physicians:* Drs. Reynaud, Vulpian, Laboulbène, Desnos, and Bernutz (Obstetric). The library of this hospital contains a large number of works in anatomy, physiology, medicine, and surgery, including numerous theses.

Hôpital de la Pitié, 1, Rue Lacépède.—709 beds. *Physicians:* Drs. Lancereaux, Gallard, Peter, Dumontpallier, Lasègue, and Brouardel; *Surgeons:* MM. Verneuil and Polaillon.

Hôpital Lariboisière, Rue Ambroise Paré.—706 beds. *Physicians:* Drs. Fernet, Jaccoud, Bouchard, C. Paul, Proust, and Siredey; *Surgeons:* MM. Duplay (Diseases of the Eye) and Labbé. Besides the ordinary clinical instruction, instruction is also given in ophthalmic surgery and diseases of the larynx.

Hôpital Saint-Antoine, 184, Rue de Faubourg Saint-Antoine.—647 beds. *Physicians:* Drs. Mesnet, Dujardin-Beaumetz, Rigal, Cornil, Hayem, d'Heilly, and Duguet; *Surgeons*: MM. B. Anger and Périer.

Hôpital Necker, 151, Rue de Sèvres.—418 beds. *Physicians:* Drs. Potain, Blachet, and Ollivier; *Surgeons:* MM. Trélat and Guyon. The Civiale museum, containing numerous calculi and specimens of diseases of the urinary organs, is attached to the hospital.

Hôpital Beaujon, 208, Faubourg Saint-Honoré.—422 beds. *Physicians:* Drs. Millard, Guyot, Gombault, and Féréol; *Surgeons:* MM. Le Fort and Tillaux. The hospital possesses a library containing 200 volumes, and a large number of theses.

Hôpital Cochin, 17, Faubourg Saint-Jacques.—249 beds. *Physician:* Dr. Bucquoy; *Surgeon:* M. Desprès; *Obstetric Surgeon:* M. Lucas-Championnière. An obstetric department is attached to this hospital; but only a limited number of students are admitted to the morning visit.

Hôpital Laennec, 42, Rue de Sèvres.—580 beds. *Physicians*: Drs. Ball, Damaschino, Ferrand, and Legroux; *Surgeon:* M. Nicaise.

Hospice de la Salpêtrière, Boulevard de l'Hôpital.—3,069 beds for old persons, and 662 for female lunatics. *Physicians:* Drs. Charcot and Luys; *Surgeon:* M. Terrier; *Physicians to the Lunatic Department:* Drs. Legrand du Saulle, Moreau, and A. Voisin. There is a medical library, founded and supported by the *internes;* it contains more than 1,500 volumes. M. Charcot, one of the physicians, gives a course of instruction on diseases of the nervous system; and MM. Luys and Voisin give courses of mental pathology.

Hospice de Bicêtre.—1,794 beds for old persons, and 540 for male lunatics. There is also a small accident ward of twelve beds. *Physician:* Dr. Debove; *Surgeon:* M. Gillette; *Physicians to the Lunatic Department:* Drs. Falret, J. Voisin, and Bourneville. The library, which was founded in 1865, contains about 2,000 volumes.

Hôpital des Enfants Malades, 149, Rue de Sèvres.—518 beds. *Physicians:* Drs. Archambault, Bouchut, and Labric (for acute diseases), Simon and Descroizelles (chronic diseases); *Surgeon:* M. de Saint-Germain. There are wards for acute and chronic diseases, small-pox, and diseases of the eye.

Hôpital Sainte-Eugénie, 89, Rue de Charenton.—427 beds. *Physicians:* Drs. Bergeron, Triboulet, Cadet de Gassicourt; *Surgeon:* M. Lannelongue.

Hôpital Saint-Louis, 40, Rue Bichat.—823 beds; of which 637 are occupied with cases of skin-disease, 28 with obstetric cases, and the rest with surgical cases. *Physicians:* Drs. Hillairet, Lailler, Vidal, Guibout, Besnier, and Fournier; *Surgeons:* MM. Péan and Le Dentu. General medicine is not taught in this hospital, but there are ample means for the special study of diseases of the skin, on which courses of theoretical and practical lectures are delivered. A museum containing several hundred models and drawings illustrating diseases of the skin; to which is added M. Fournier's collection of illustrations of venereal diseases. The hospital is also rich in surgical cases.

Hôpital du Midi, 111, Boulevard du Port-Royal.—336 beds, devoted exclusively to the reception of cases of venereal disease. *Physicians:* Drs. Simonet and Mauriac; *Surgeon:* M. Horteloup.

Hôpital de Lourcine, 111, Rue de Lourcine.—243 beds. *Physicians:* Drs. Gougenheim and Martineau; *Surgeon:* M. Terrillon. Students are admitted to the hospital by special ticket.

Hôpital Tenon, Rue de la Chine.—635 beds. Besides these, 190 beds can be added in cases of epidemics, etc. *Physicians:* Drs. Gérin-Roze, Hallopeau, Grancher, Dieulafoy, Straus, and Rendu; *Surgeons:* MM. T. Anger and Delens.

Maison d'Accouchement, 121, Boulevard du Port-Royal.—316 beds. *Physician:* Dr. Hervieux; *Surgeon:* M. Tarnier; *Assistant-Surgeon:* M. Lucas-Championnière. This hospital is employed exclusively for the education of midwives, and is not open to students of medicine. Attached to the hospital is a school for midwives.

Hospital Appointments in Paris: Concours.

The medical staff of each hospital in Paris consists of—1. Physicians and Surgeons; 2. Prosectors; 3. *Internes* and *Externes* in Medicine and in Surgery; 4. *Pharmaciens;* 5. *Internes* in Pharmacy.

All the appointments in the hospitals of Paris are obtained by *concours;* and, when vacant, are eagerly competed for.

Each medical service is under the direction of a physician, and comprises also an *interne* and three or four *externes*. The organisation of the surgical departments is similar; but the number of pupils is greater, and there are generally two or three *internes* and five or six *externes*.

The chief of the medical staff, physician or surgeon, receives annually a sum of 1,200 *francs* (£48) in the central hospitals, and 1,500 *francs* (£60) in the more distant ones. The physicians retire from hospital duty at the age of 65, and the surgeons at 63. When first nominated, they have to attend the consultations at the central bureau, and to do duty for any of the hospital physicians and surgeons that may be absent. As vacancies occur in the hospitals, they receive appointments in the order of their nomination.

The *internes* and *externes* are nominated by *concours* for four years, and receive 500 *francs per annum* for the first two years, 600 *francs* the third year, and 700 *francs* the fourth year. Some of them are also provided with lodging, fire, and light; others receive 400 *francs* yearly in lieu of lodging.

The *interne* is the most direct assistant of the hospital physician or surgeon; he accompanies him in his morning visit, and himself visits the patients in the evening. The *internes* remain on duty in turn, to attend to urgent accidents and cases of illness.

In November, the *internes* are invited to compete for prizes. To those of the first and second years are offered a silver medal, books, and two certificates of honour. Those of the third and fourth years compete for a gold medal, a silver medal, and two certificates of honour. The successful candidate for the gold medal is entitled to two additional years of *internat*.

Those candidates who are placed in the first list at the *concours*, but do not succeed in getting appointments, are termed provisional *internes*, and fill the places of those who are absent. They have, however, to compete again at the end of the year, if they desire to receive appointments.

The *externes*, who are appointed for three years, have to take records of cases, either alone or under the direction of the *internes*, to assist the latter in dressing difficult cases, and to dress the minor cases. The *externes* at the central hospitals are not paid; at those more distant from the centre of the city, they receive 300 *francs* yearly; at others more distant, one *franc* daily; at the Maison de Santé, 300 *francs* yearly, and 300 *francs* for expenses; at the Tenon hospital, 50 *francs* monthly.

The *concours* for the *externat* generally commences early in October and continues until the end of December. Candidates must not be under 18, nor above 26 years of age. They must produce—1. A register of birth; 2. A certificate of vaccination; 3. A certificate of good conduct signed by the mayor of the commune in which the candidate is domiciled; 4. A certificate of at least one inscription in the Faculty of Medicine. The examination consists in—1. An oral description of some subject in descriptive anatomy; 2. A similar description of some elementary subject in pathology or minor surgery. For each five minutes are allowed, after five minutes of reflection. The maximum number of marks that can be gained by a candidate is 20 for each examination. The examination is conducted by four physicians and three surgeons of the central bureau, generally from those most recently appointed.

The *concours* for the *internat* takes place nearly at the same time as that for the *externat*. Candidates must not be more than 28 years old, and must produce certificate of having performed the duties of *externe*, at least from the first day of the preceding January, without interruption (unless this have been unavoidable); also certificates from the physicians and surgeons and the directors of the hospitals in which they have performed the duties of *externe*, testifying to their punctuality, obedience, and good conduct. The examination commences with a written essay on some subject in anatomy and medical or surgical pathology, for which two hours are allowed. This is followed by an oral examination in the same subjects; ten minutes being allowed for each answer, aften ten minutes of consideration. The maximum of marks obtainable for the written examination is 30; for the oral 20. After this the candidates are classified.

At the end of the *concours*, the candidates are classified according to the number of marks; and the 35 or 40 first on the list are nominated *internes*.

The first four candidates on the list are the successful candidates for the prize for *externes*, the examination for which is the same as that for the *internat*. The first receives a case of instruments of the value of 300 *francs*, and has, during his first year, the sum of 800 *francs* in addition to the payment which he receives in common with the other *internes*. The first and second canditates are also presented with books.

The prizes offered to the *internes* are competed for in the beginning of November. The examination consists in—1. A written composition, for which two hours are allowed, bearing on anatomy, physiology, and pathology; 2. An oral description of some subject in external pathology; 3. A similar description of some subject in internal pathology (for each of these ten minutes are allowed); 4. *Internes* of the third and fourth years must also have sent in, before August 15, an original essay on some subject selected by them; this is generally based on observations made in the hospital.

The Civiale prize, of the value of 1,000 *francs*, is given every second year to the best essay by an *interne* on duty on some point in the pathology of the genito-urinary passages.

The *concours* at the Bureau central for the office of physician consists of five examinations. 1. The candidate gives a lecture for a quarter of an hour on a patient, for whose examination ten minutes are allowed. 2. A lecture of twenty minutes' duration, after twenty minutes' reflection, on some subject in medicine. 3. A written consultation on a medical case; ten minutes being allowed for examining the patient, and three-fourths of an hour for writing out the consultation. To each of these examinations a maximum of 20 marks is allotted. During these three examinations, a process of elimination takes place, so that at last there remain five candidates for one place, eight for two, and ten for three places. These are then further subjected to the following tests: 1. A written composition for which three hours are allowed, on some subject in medicine, which must comprise a question in pathological anatomy; 2. A lecture of thirty minutes' duration on two patients, twenty minutes being allowed for examining them.

In the *concours* for the office of surgeon, the examinations are nearly the same; there is, in addition, an examination in operative surgery, and the candidate has to lecture on one subject instead of two.

Medical Service of the French Army.

Candidates for admission to the French medical service are chosen yearly by *concours*, in numbers proportioned to the demands of the service. They are distributed, at their own option and convenience, among the towns which possess military hospitals or wards for soldiers in civil hospitals, and have also a school of medicine; viz., Paris, Lille, Nancy, Lyons, Marseilles, Montpellier, Toulouse, Bordeaux, Nantes, Rennes, and Algiers: and *concours* are held at each of the places, for admission of pupils in medicine and pupils in pharmacy.

The following classes of candidates are admitted as pupils in medicine: 1. Students having eight, twelve, or sixteen inscriptions for the doctorate, and having passed the corresponding examinations: 2. Doctors in medicine. They must be born or naturalised Frenchmen, and must not have exceeded, on January 1st of the year in which the *concours* takes place, 23 years of age in the case of students with eight inscriptions, 24 years in the case of students with twelve, 25 years in the case of students with sixteen inscriptions, and 26 years in the case of doctors of medicine. They must be certified as fit

for service by an army medical officer holding the rank of surgeon-major or a higher rank, and, if necessary, their fitness may be verified by an examining board; and they must engage on honour to serve at least ten years from the date of appointment of *aide-major* of the second class. Candidates must make applications for admission on a form to be obtained at the offices of the military intendants resident in the places above mentioned.

The subjects of the examinations at the *concours* are as follows. For candidates with eight inscriptions: 1. A written composition on a question of physiology; 2. Questions on descriptive anatomy and physiology. For candidates with twelve inscriptions: 1. A composition on a subject in general pathology; 2. Questions in internal and external pathology; 3. Questions on anatomy and psychology. For candidates with sixteen inscriptions: 1. A written composition on a question in medical pathology and therapeutics; 2. Questions on external pathology and operative surgery; 3. Questions on internal pathology, hygiene, and therapeutics. For doctors in medicine: 1. A written composition on a subject in general pathology; 2. An oral examination on regional anatomy and its applications to medicine and surgery; 3. Clinical examination of two patients. The examinations are conducted by a board, consisting of a medical inspector as president, a professor and an *agrégé* professor in the School of Military Medicine and Pharmacy, and the professor of applied chemistry in the school, together with a *pharmacien-major* of the first class. Three hours are allowed for writing the essay; and each series of questions occupies twenty minutes.

Having passed a satisfactory examination, the candidates are attached to the military hospitals or wards in the town, and are subject to certain disciplinary rules with the object of regulating their studies. They do not wear uniform. Each candidate is allowed, for two years at most, from the time of his thirteenth inscription, a sum of 1,200 *francs* (£48) *per annum*, to pay for maintenance, books, and instruments. Those alone who have been bursars in the military Prytaneum are allowed, from the time of their admission as pupils in the military medical service, a monthly allowance of 1,200 *francs* in Paris, 1,000 *francs* in Lyons and Marseilles, and 800 *francs* in the other towns.

In case of rejection, the fees for admission to a second examination must be paid by the candidate; and no one is admitted after a second rejection. Permission to study during an additional year is granted only when the pupil has been prevented by illness during at least two months in the year from following his studies.

Doctors of medicine, who have passed the required examinations, are admitted to the School of Military Medicine and Pharmacy, Val-de-Grâce, with the title of *médecin stagiare*. The instruction given to them in the school is essentially practical, and has special reference to the requirements of military service. They are allowed 2,800 *francs* (£112) yearly, and wear uniform. They attend the school of Val-de-Grâce in Paris during at least eight months; and, if found qualified on examination, receive the rank of *aide-major* of the second class.

Naval Medical Schools.

For the purpose of training medical officers for the navy, there are three schools: Brest, Rochefort, and Toulon.

GERMANY.

GRADUATION IN MEDICINE.

In the German empire there are twenty Universities which possess a Medical Faculty and grant degrees in Medicine; viz., those of Berlin, Bonn, Breslau, Erlangen, Freiburg im Breisgau, Giessen, Göttingen, Greifswald, Halle, Heidelberg, Jena, Kiel, Königsberg, Leipzig, Marburg, Munich, Rostock, Strasburg, Tübingen, and Würzburg.

No one can legally practise Medicine in this empire unless he have passed the 'Staats-Examen' Board. The law forbids anyone to call himself *Arzt* (Physician) unless he have passed the State Board; or Doctor, unless he have passed the examinations at some University, and thereby acquired the degree. The doctor who has not passed the State Board is not a licensed physician, and may hold no appointment; and if he practise, he has no power or right to insist on payment of his services. The practitioner who is neither doctor nor physician, if any mishap occur from his ignorance, is punished not only by fine, but by imprisonment for a period varying from six months to ten years.

The expenses of passing the State Board are less than half of those for the faculty of an University, and the examination is more exclusively practical; hence it is selected by the poorer students who seek only a rural practice. The majority of students pass both the University and State examinations, and this is especially necessary for those who aspire to any medical office.

No medical diploma, either from an University or otherwise, can be obtained in Germany without a gymnasial certificate, to obtain which an examination must be passed at a German gymnasium (public school) in Greek, Latin, at least one Modern Language besides German, Logic, the Physical Sciences, and Mathematics. A candidate who cannot present this, or an equivalent certificate, must pass a preliminary examination in those subjects.

The number and character of professional chairs in the medical faculties vary greatly in the different Universities; but in all we find three classes of teachers, viz., professors, extraordinary or assistant professors, and *privat-docents*.

The professors are appointed for life, and at the end of thirty years' service can retire on a pension; they receive a fixed salary from the State or University—a part of the revenue derived by the medical faculty from certain fees, and their lecture fees from the students. The fixed salary is occasionally increased, according to the success and reputation of the professor. Any doctor in medicine may be a candidate for a vacant chair, the selection being made by the Minister of Public Instruction from a list of names recommended by the faculty.

The extraordinary or assistant professors are appointed in like manner from among the *privat-docents*. As a rule, their compensation comes only from students' fees, but occasionally a small fixed salary is allowed.

There are no independent schools in Germany. There is, however, little objection to free, or, as it is sometimes called, 'extramural teaching', and hence young men of ability can establish themselves as private teachers, demonstrators, etc., in the immediate vicinity of the Universities, relying on their own talents and tact to secure pupils. These are the *privat-docents*, much of whose teaching consists in giving short courses, of from six to eight weeks'

duration, on special subjects. The position of *privat-docent* is accessible to all doctors of medicine, and the number is unlimited. Their compensation is from students' fees, and they may not underbid the regular professor. At some Universities they are furnished with rooms, and given a share of the clinics; at others, they receive little or no assistance. The *privat-docents* are understood to be in training for professorships, and, if they show marked ability as teachers or as investigators, their promotion may be very rapid.

The course of study at the German Universities varies according to the requirements for the particular medical degree, but in no case is it less than three years. At some, the course extends over four years. The following lectures are the least which will be accepted by any of the University faculties, and may be taken in whatever order the student may wish. The courses occupy nine-and-a-half months in each year. For one year: Chemistry, six hours weekly; Physics, four hours weekly; Zoology and Comparative Anatomy, three hours weekly; Botany, three hours weekly; Mineralogy and Geology, two hours weekly; Anatomy, Histology, and Preparation of Specimens, ten hours weekly; Physiology and Laboratory Work, eight hours weekly; General Pathology, Pathological Anatomy, and Practical Work, six hours weekly; Pharmacology and Toxicology, two hours weekly. For two years: Special Pathology and Medical Clinic at Hospital, ten hours weekly; General and Special Surgery, Hospital Clinics, and Operating, ten hours weekly for one year, or five hours weekly for two years. This course may not be taken at the same time as the previous medical course. Obstetrics and Gynæcology, with Clinics, three hours weekly for one year; Eye and Ear Clinics, Use of Ophthalmoscope, Operations, four hours weekly, for one year; Forensic Medicine, two hours weekly, for one year.

The professors receive fixed salaries, varying from £120 to £480 annually, and increased every ten years by the addition of from £20 to £50. The students' fees for the entire course vary in different schools from £36 to £52.

Regulations for the German Staats-Examen.

The examination for the licence to practise as a Physician, Surgeon, and Accoucheur, in any part of the German Empire, may be either passed before the Medical Examination Commission at Berlin, or before a Medical Examination Committee at any German University. The Examination Committees, consisting of scientifically educated professional men in all branches of the Faculty, are appointed every year by the authorised Central Board, on whose decision it depends whether the President of the Commission shall be selected from the examiners or not. The notice for examination before the superior Examination Committee must be deposited with the Minister of Medical Affairs at Berlin, and the notice for examination before an Academical Examination Committee with the acting Curator of the University chosen, or, in default of such functionary, with the nearest superior Court of the Examination Commission. To the notice for examination must be attached: 1. A certificate of having completed a course of study at a gymnasium; 2. A certificate of the full course of medical study at an University; 3. A certificate of proficiency at the Natural Science Examination of some German University; 4. Proof that the candidate has taken part and had practice for at least two terms both in Clinical Surgery and in Clinical Medicine, and in Clinical Midwifery has attended at least four separate labours; 5. A testimonial from a public vaccinator, or some other recognised medical man, that the candidate has acquired the necessary dexterity in Vaccination.

The examinations commence every year in November, and are not continued beyond the middle of July in the following year.

Candidates who have not reported themselves at the latest by the end of the year, and who have not deposited the certificates required, are not admitted to examination before the November following. Exceptions to this rule can only be made under very special circumstances.

The examination is divided into five parts, viz.: 1. Anatomical, Physiological, and Pathological; 2. Surgical and Ophthalmic; 3. Medical; 4. Gynæcological; 5. *Vivâ voce*. All candidates, without exception, must pass these examinations in the above order.

In the first portion, the candidate has to write essays on the various subjects, and also to demonstrate on the dead body, and reply to questions put to him.

In the second portion, the candidate has to undergo a clinical and a technical test. The clinical part is conducted in the surgical department of a large hospital, or in the clinic of an University, and usually lasts from seven to nine days, the candidate during this period taking charge of several patients, under the supervision of one of the examiners. During this period, also, the candidate may be required to satisfy the examiners that he can operate on the dead body, and is always required to give his diagnosis in an ophthalmic case.

The third portion of the examination is devoted to medicine, and is purely clinical. The candidate is examined in a hospital or in a clinic of an University, and is required to write prescriptions, and to give his opinion as to the doses of certain drugs used in certain cases of sickness.

The fourth portion consists in an examination conducted in the Charity Lying-in Hospital at Berlin, or in the Lying-in Hospital of an University. The candidate has to examine cases in the presence of an examiner, and to give the diagnosis, prognosis, and treatment. He is also required to attend a case of labour in the presence of an examiner, and to write down his opinion afterwards, stating the exact presentation, etc. He is also required to undertake the treatment of cases during seven days, under the superintendence of an examiner.

The fifth portion, the *vivâ voce* examination, is conducted publicly, under the superintendence of the President of the Examination Commission, by three Commissioners. To this examination, only those candidates are admitted who have satisfactorily passed the previous portions. This examination includes General and Special Pathology, Therapeutics, Surgery, Midwifery, Pharmacy, and Hygiene. Any candidate who fails to pass these five portions of the examination twice will not be readmitted to examination.

The fee for the examination is 204 marks (or £10 4s. English money), viz.:

	£	s.	d.		Marks.
1st portion	2	6	0	=	46
2nd ,, ...	3	3	0	=	63
3rd ,, ...	1	14	0	=	34
4th ,, ...	1	4	0	=	24
5th ,, ...	0	6	0	=	6
Expenses ...	1	11	0	=	31
	£10	4	0		204

The examinations are always conducted in the German language.

UNIVERSITY OF BERLIN.*

THE conditions for promotion to the Doctorate of Medicine, Surgery, and Midwifery, at the Royal Frederick William University at Berlin, are as follows.

1. Candidates must have studied medicine at least four years in one or more Universities regularly constituted. Universities and Medical Colleges abroad are deemed equivalent to the Universities in Germany. 2. Candidates under 30 years of age who have not matriculated at this University, or who have left previously to their application for promotion, must matriculate again. This can be done free of cost. Both these and matriculated students of this University must, before making application for promotion, take out a preliminary certificate of having left, and will not receive the real certificate until after promotion. 3. The candidate has to make application to the Dean, handing in at the same time the documents mentioned under 1 and 2. He has then to pass a written and verbal preliminary examination before the Dean, before being admitted to the *examen rigorosum* before the Faculty. The verbal examination is generally conducted in German or Latin, and extends to all branches of theoretical and practical medicine. At the written examination, an *ex tempore* essay must be written, without any assistance, in a given time. 4. After the preliminary examination, the Dean lays before the Faculty the documents having reference to the personality and the course of studies of the candidate, the judgment respecting the preliminary examination, and the essay composed thereat. Should that body decide for admission, the Dean will appoint as early a time as possible for the *examen rigorosum*. 5. The *examen rigorosum* takes place before six members of the Faculty, is verbal only, and is concluded at one sitting, each of the examiners examining the candidate for a quarter of an hour. No branch of theoretical and practical medicine and surgery is excluded. It is generally held in German, but, if necessary, in Latin. From this examination no candidate can be exempted. If he be rejected, six months must elapse before re-admission. 6. After this, the candidate must present a German or Latin dissertation. The members of the Faculty are ready to advise the candidate as to the choice of a subject for his essay; but the essay must be entirely original; and the candidate must declare on oath in writing that he has composed it entirely himself. If the manuscript be pronounced good by the Faculty, the candidate will have to get printed, at his own expense (about 85 marks), by a certain printer, a prescribed number of copies. It must consist of at least two quires, and give evidence of a good scientific knowledge. To this must be annexed a brief *curriculum vitæ*, and at least three theses approved by the Dean. 7. After this, follows the public discussion in the Aula of the University. The discussion has reference both to the dissertation and to the theses. Next, the opponents chosen by the candidate, who must be at least three in number, divide on the subject. Their names must appear on the title-page of the dissertation. Afterwards anyone belonging to the University is at liberty (*e coronâ*) to oppose. Both the candidate and the opponents must be dressed in black. The discussion is either in German or in Latin. The Minister of Education has the privilege of allowing the use of another language, and also of dispensing with the discussion. 8. After the discussion is ended, the oath-taking and promotion of the candidate as a Doctor of Medicine, Surgery, and Midwifery takes place, conducted by the Dean or his representatives. After the ceremony of promotion is completed, the Dean delivers the diploma to the newly created doctor, who inscribes his name in the book of the Faculty. The expense of making out the diploma (15 *marks*) is borne by the candidate. A copy of it is fixed on the black board of the Faculty, and a certain number of copies are delivered to the Registrar of the University, for distribution. Promotion *in absentiâ* can on no account take place. 9. Four hundred and forty *reichsmarks* (£22) must be paid to the Dean as fees for the degree of Doctor in Medicine, of which 221 *marks* must be paid on application, and are forfeited after the *examen rigorosum*, if the candidate be unsuccessful. The second portion (204 *marks* for the Faculty and 15 *marks* for the University library) may be paid either at the same time with the other or within the period between the *examen rigorosum* and the promotion. In addition to this, the candidate has to pay expenses of printing the dissertation and diploma (*vide* 6 and 8). 10. The shortest time in which the whole of the proceedings for obtaining a doctor's degree can be gone through is ten days. In this case, however, it is stipulated that the dissertation be delivered ready for printing to the Dean at the first application, and that the other business of the Faculty permits them to proceed at once to the examinations.

The Medical Faculty of this University consists of the following professors, with between forty and fifty *docents* or private teachers. *Ordinary Professors:* B. von Langenbeck, Surgery and Clinical Surgery; K. B. Reichert, Anatomy; A. Bardeleben, Surgery and Clinical Surgery; R. Virchow, Pathology; F. T. Frerichs, Medicine and Clinical Medicine; E. Du Bois-Reymond, Physiology; A. Hirsch, Medicine and Epidemiology; E. Leyden, Medicine and Clinical Medicine; C. Schröder and A. Gusserow, Obstetrics and Gynæcology; O. Liebreich, Materia Medica and Chemistry; C. Schweigger, Diseases of the Eye and Ophthalmic Clinic; C. Westphal, Psychology and Psychiatric Clinic. *Extraordinary Professors:* E. Henoch, Diseases of Children; E. Gurlt, Practical Surgery; C. Liman, Forensic Medicine; C. Skrzecka, Hygiene and Medical Police; J. Meyer, Medicine; R. Hartmann, Anatomy; G. Lewin, Diseases of the Skin and Syphilis; H. Jacobson, Medicine; E. Albrecht, Dental Surgery; H. Munk, Physiology; C. A. Ewald, Physical Diagnosis; A. Lucae, Aural Surgery; E. Salkowski, Chemistry; G. Fritsch, Physiology; O. Fräntzel, Medicine; H. Senator, Diseases of Children; F. Busch, Surgery; H. Kronecker, Physiology; H. Fasbender, Gynæcology; H. L. Schöler, Ophthalmic Surgery; J. Hirschberg, Ophthalmic Surgery; E. Küster, Surgery; A. Christiani, Physiology. The following professors also give instruction in subjects connected with medicine in the Philosophical Faculty. *Ordinary Professors:* S. Schwendener, Botany; H. Helmholtz, Physics; W. Peters, Zoology; A. W. Hofmann, Chemistry; A. W. Eichler, Botany; C. Rammelsberg, Chemistry. *Extraordinary Professors:* A. Garcke, Botany; L. Kny, Botany; P. Ascherson, Botany; E. von Martens, Zoology; E.

* For much of the information in this and subsequent pages, we are indebted to Dr. Hardwicke's *Medical Education and Practice in all Parts of the World.*

Sell, Chemistry; A. Pinner, Chemistry and Pharmacy; C. Liebermann, Chemistry; L. Wittmack, Botany; C. Jessen, Botany.

The institutions for Clinical treating connected with the University are: Professor von Langenbeck's Clinic for Surgery; the University Polyclinic (Dr. J. Meyer); the Ophthalmic Polyclinic (Dr. Schweigger); the Aural Polyclinic (Dr. Lucae); the Obstetric Clinic (Dr. Schröder); the Institute for Practical Instruction in State Medicine (Dr. Liman); and, in the Charité Hospital, the Medical Clinic (Dr. Frerichs), the Clinic for Elementary Medical Instruction (Dr. Leyden), the Surgical Clinic (Dr. Bardeleben), the Ophthalmic Clinic (Dr. Schweigger), the Obstetric Clinic (Dr. Gusserow), the Gynæcological Clinic (Dr. Schröder), the Clinics for Diseases of the Skin and Syphilis (Dr. Lewin), for Diseases of Children (Dr. Henoch), and for Diseases of the Mind and Nervous System (Dr. Westphal). The Pathological Institute is under the direction of Professor Virchow; the Physiological Laboratory under that of Professor Du Bois-Reymond; the Chemical Laboratory under that of Professor Hofmann; and the Pharmaceutical Laboratory under that of Professor O. Liebreich. The Pathological Institute, which owes its existence in its present form to Professor Virchow, and has served as the model for numerous similar institutions in Germany and elsewhere, is situated within the grounds of the Charité Hospital. It contains a lecture-theatre, a room for demonstrations, a museum, a chemical laboratory, a histological laboratory, a suite of rooms for the *post mortem* examinations, private rooms for the professor and his assistants, while in the basement-floor there are kept animals for experiment.

UNIVERSITY OF BONN.

A DEGREE in Medicine, Surgery, and Midwifery, is granted only under the following conditions, viz.:

1. An examination in all branches of medicine and surgery, of about three hours' duration, in the German language. 2. A written scientific dissertation in German or Latin. 3. Public defence of the dissertation in German or Latin. 4. Fee for the examination and diploma, 360 *marks* (£18), which must be paid prior to examination.

The following are the Professors in the Medical Faculty of this University. *Ordinary Professors:* C. Binz, Materia Medica; W. Busch, Surgery; C. Köster, Pathology; A. de la Valette St. George, Anatomy and Histology; F. von Leydig, Comparative Anatomy; E. Pflüger, Physiology; H. Rühle, Medicine; T. Sämisch, Diseases of the Eye; G. Veit, Gynæcology and Forensic Medicine. *Extraordinary Professors:* C. Finkelnburg, Mental Diseases; J. Doutrelepont, Surgery; C. von Mosengeil, Surgery; F. Obernier, Diseases of Children; H. Schaaffhausen, Physiology; M. Nussbaum, Anatomy and Histology; N. Zuntz, Anatomy and Histology. Instruction is also given in the Philosophical Faculty—*Ordinary Professors:* F. H. Troschel, Zoology; R. Clausius, Experimental Physics; E. Strassburger, Botany; and A. Kekulè, Chemistry. *Extraordinary Professor:* O. Wallach, Chemistry; F. Schmitz, Botany.

Connected with the University are medical, surgical, obstetric, and ophthalmic clinics; an anatomical theatre and museum, and physiological, pathological, pharmacological, and chemical institutes.

UNIVERSITY OF BRESLAU.

THE following Professors belong to the Medical Faculty of this University. *Ordinary Professors:* A. Biermer, Medicine; E. Ponfick, Pathology; H. Fischer, Surgery; R. Förster, Ophthalmic Surgery; H. Häser, Materia Medica and Therapeutics; C. Hasse, Anatomy; R. P. H. Heidenhain, Physiology; Obstetrics and Gynæcology (vacant). *Extraordinary Professors:* L. Auerbach, Comparative Anatomy; H. Cohn, Ophthalmology; H. Friedberg, Forensic Medicine and Public Health; R. Gscheidlen, Physiology and Physiological Chemistry; I. Klopsch, Surgery; O. Simon, Diseases of the Skin and Syphilis; H. Neumann, Psychological Medicine; E. Richter, Surgery; R. Voltolini, Diseases of the Ear; L. Hirt, Forensic Medicine and Hygiene; H. Sommerbrodt, Medicine; O. Berger, Medicine. Instruction is also given in the Philosophical Faculty on subjects connected with medicine by — *Ordinary Professors:* C. J. Löwig, Chemistry; H. R. Göppert, Pharmacology; A. Schneider, Zoology; O. E. Meyer, Experimental Physics; T. Poleck, Chemistry; F. Cohn, Botany. *Extraordinary Professors:* G. W. Körber, Botany; F. E. Dorn, Physics; V. von Richter, Chemistry.

The University possesses anatomical, physiological, pathological, pharmaceutical institutes, and clinics of medicine, surgery, obstetrics, ophthalmic surgery, syphilis and skin-diseases, and mental diseases.

UNIVERSITY OF ERLANGEN.

THE following are the regulations to be observed by candidates for the degree of Doctor of Medicine in this University.

1. Candidates for the degree of Doctor must announce their intention to the Dean of the Faculty of Medicine, and present the following documents: *a.* Evidence of having gone through the curriculum in a German gymnasium, or proof of equivalent general education; *b.* Proof of having studied medicine in one of the German Universities, or in a corresponding medical school abroad, during at least three years; *c.* A thesis, composed by the candidate, on some subject in medicine or natural science, with a written declaration, on word of honour, that the work is absolutely the candidate's own. 2. The dissertation is examined by a referee, appointed by the dean; and, if it be judged to be of sufficient merit, the candidate is admitted to an oral examination, which is conducted in the German language. It may take place in two forms; *a.* As a colloquium, in the case of those who have passed an examination in medicine before a German examining board; *b.* As an extended examination on all departments of medical science, in the case of those who have not passed such an examination. The colloquium takes place under the presidency of the dean before three delegates of the Faculty; the detailed examination is conducted by the dean and four other members of the Faculty. Both the colloquium and the latter examination are held in public, and in German. 3. After the conclusion of the oral examination, the examiners decide on the result. If the decision be favourable, the degree of Doctor is at once conferred, the fact being communicated to the candidate by the dean, and his diploma issued to him. 4. The candidate, if his dissertation be approved, must have it printed at his own expense. At the back of the title-page it must be

stated that the dissertation is printed with the consent of the Faculty; and the name of the reporter (*referent*) must be given. 5. The candidate must pay a fee of 300 *marks* (equal to about £15 10s.) for the granting of the Doctor's degree, and must also deliver 150 copies of his dissertation to the Faculty. 6. If the candidate fail to pass the examination, half of the fee is returned to him.

The Medical Faculty of this University consists of the following professors, with teachers. *Ordinary Professors:* J. von Gerlach, Anatomy; F. A. Zenker, Pathology; W. Heineke, Surgery; I. Rosenthal, Physiology; W. O. Leube, Practice of Medicine and Clinics; H. Sattler, Ophthalmology; P. Zweifel, Midwifery. *Extraordinary Professors:* F. W. H. Trott, Materia Medica and Hygiene; A. Wintrich, Medicine and Laryngology; F. W. Hagen, Psychological Medicine; W. Filehne, Materia Medica and Therapeutics. Instruction in subjects connected with medicine is also given in the Philosophical Faculty. *Ordinary Professors:* E. Lommel, Experimental Physics; J. Volhard, Chemistry; M. Reess, Botany; E. Selenka, Comparative Anatomy; A. Hilger, Pharmacy and Chemistry.

In connection with the University are the following institutions: the University Hospital, with medical, surgical, obstetric, psychiatric, and ophthalmic clinics; an anatomical, a physiological, and a pathological institute.

UNIVERSITY OF FREIBURG.

The Faculty of Medicine here grants a degree in Medicine, Surgery, and Midwifery. The following are the conditions to be observed before being admitted to examination.

1. A certificate must be produced showing the respectability of the candidate, and also the amount of his education, both prior to and since his admission as a medical student. 2. A scientific dissertation must be handed to the Dean, written in German or Latin. 3. A fee of 300 *marks* (£15) must be paid to the Chief Beadle. In case of rejection, the candidate will receive half the fee back; and when he presents himself for examination again, he pays only that amount, viz., 150 *marks*. Should these conditions be complied with, and the thesis be deemed satisfactory, the candidate will be admitted to a *vivâ voce* examination in the German language.

The following are the subjects for examination: Anatomy, Materia Medica and Toxicology, Physiology, Medicine, Surgery, Pathological Anatomy, Midwifery, Ophthalmology.

If a candidate have already passed an examination as Physician before a German commission of examiners, the number of subjects may be reduced.

If the examination be passed, one of the following grades of honour is conferred: 1. *Summâ cum laude;* 2. *Insigni cum laude;* 3. *Cum laude.*

The Medical Faculty of the University is thus constituted. *Ordinary Professors:* A. Ecker, Human and Comparative Anatomy; L. von Babo, Chemistry and Physiology; R. Maier, Pathological Anatomy and State Medicine; A. Hegar, Midwifery; F. Hildebrand, Botany; W. Manz, Ophthalmic Surgery; Ch. Bäumler, Materia Medica and Medicine; G. F. L. Thomas, Materia Medica and Medicine; H. Maas, Surgery. *Extraordinary Professors:* A. Schinzinger, Surgery; R. Kaltenbach, Midwifery; J. Latschenberger, Physiological Chemistry and Practical Physiology; R. Wiedersheim, Anatomy and Histology; A. Röhrig, Pharmacology; E. Ziegler, Pathological Anatomy; J. von Kries, Physiology; P. Langerhans; J. von Rotteck. In the Philosophical Faculty, lectures on subjects connected with medicine are given by Professors A. Weismann in Zoology, A. Claus in Chemistry, and E. Warburg in Experimental Physics.

The University library contains 250,000 volumes. There are a chemical laboratory and institutions for the practical study of anatomy, pathology, physiology, etc.; and medical, surgical, obstetric, and ophthalmic clinics.

UNIVERSITY OF GIESSEN.

The Faculty of Medicine grants a degree in Medicine, Surgery, and Obstetrics, which can only be obtained on the following conditions.

1. A *curriculum vitæ*, written by himself, must be sent to the Faculty by the candidate; also a certificate of gymnasial maturity, and a certificate of at least three years' medical and surgical study at an University or a Medical Institution. If the candidate be not a native of Germany, he must produce a certificate of sufficient preliminary studies from his own country in place of the gymnasial maturity certificate (a degree in arts or certificate of having passed the matriculation examination for medical students at any recognised University is sufficient). 2. The candidate must present a dissertation on some medical subject, written in German or Latin, together with a declaration in his own handwriting that he has composed the dissertation himself, without help from others, except what may be stated by him. In place of the dissertation, a previously published treatise or literary production may be substituted. 3. In case of admission by the Faculty, the whole of the documents are laid before the Rector and the Chancellor, who may object to the admission if they be not satisfied. 4. If no objection be made by the Rector and Chancellor, and the candidate have paid the promotion fees to the Quæstor of the University, the dissertation is to be judged by a Referee. If the Referee declare the work to be unsatisfactory, the candidate is rejected. In the contrary case, he is admitted to *vivâ voce* examination before the Faculty. 5. The *vivâ voce* examination takes place in the German language, and lasts two or three hours. It is held in public, except when the candidate is already advanced in age, or in a few other cases when the Faculty decree that it may be held in private. 6. The verbal examination embraces the following subjects: Anatomy, Physiology, Pathological Anatomy, Histology, Pathology and Medicine, Materia Medica and Therapeutics (including Toxicology), Surgical Pathology and Surgery, Forensic Medicine, Obstetrics. 7. Immediately after the conclusion of the examination, the result is decided on by the President and examiners in a private sitting, and at once made known to the candidate by the President. The examination is not passed when two or more members of the Faculty declare the result of the examination to have been unsatisfactory. The kind of degree to be granted is decided by a majority of votes—whether *cum laude, magnâ cum laude*, or *summâ cum laude*. 8. The approved dissertation must be printed and published, and the appointed number be presented to the Faculty before the promotion take place. Exception is made when the candidate has already handed in a printed treatise. 9. Promotions to the M.D. *in absentiâ* do not take place at this University, except in the case of degrees granted *honoris causâ* by the unanimous

decision of the Faculty, to men who have rendered some great service to the science of medicine. 10. The fee for promotion is 440 *marks* (£22), which must be paid to the Quæstor of the University at the time of the petition for admission. If the dissertation be not considered satisfactory, and the candidate in consequence be not admitted to the verbal examination, 100 *marks* are retained by the Faculty. If the verbal examination be not passed, half the fees are forfeited; but, if the candidate present himself again, he has only to pay half the fees.

The following are the professors in the Faculty of Medicine in this University. *Ordinary Professors:* H. Bose, Surgery; J. Wilbrand, Forensic Medicine and Hygiene; C. Eckhard, Physiology and Toxicology; F. Riegel, Medicine; F. Ahlfeld, Obstetrics and Gynæcology; G. Pflug, Veterinary Medicine; F. Marchand, Pathology; F. W. von Hippel, Ophthalmic Surgery; C. Gähtgens, Materia Medica. *Extraordinary Professors:* F. Birnbaum, Diseases of Children; F. Eichbaum, Histology and Veterinary Medicine. There are also two *docents*. In the Philosophical Faculty, subjects connected with medicine are taught by—*Ordinary Professors:* H. Will, Chemistry; H. Hoffmann, Botany; W. C. Röntgen, Experimental Physics; A. Schneider, Zoology. *Extraordinary Professors:* A. Naumann and A. Laubenheimer, Chemistry.

The University Library contains 140,000 volumes. There are an academical hospital, with medical, surgical, and ophthalmic clinics, a lying-in institution, a chemical laboratory, a physiological, a pathological, and a pharmacological institute.

UNIVERSITY OF GÖTTINGEN.

A DEGREE in Medicine, Surgery, and Obstetrics is granted under the following conditions.

1. A written essay must be sent in on any medical subject chosen by the candidate, on the result of which depends the entrance to the examination. 2. If the essay be considered satisfactory, the student is admitted to a *vivâ voce* examination, which lasts a few hours, and is always held in German or Latin, at the option of the candidate. 3. A fee of 439 *marks* (£21 19s.) must be paid to the Medical Faculty prior to examination. 4. The subjects of examination are Anatomy and Morbid Anatomy, Physiology, Pharmacology, General Pathology and Medicine, Surgical Pathology and Surgery, Toxicology, Medical Jurisprudence, and Obstetrics.

If the candidate be successful, he receives a diploma, and promises to hold his academical honour with dignity.

The Medical Faculty of this University consists of the following professors, with private teachers. *Ordinary Professors:* J. Henle, Anatomy; F. Wöhler, Chemistry; G. Meissner, Physiology; H. Schwartz, Midwifery and Diseases of Women; L. Meyer, Psychological Medicine; Th. Leber, Ophthalmic Surgery; W. Ebstein, Medicine; W. Marmé, Materia Medica; F. König, Surgery; J. Orth, Pathology; W. Baum; *Extraordinary Professors:* H. Eichhorst, Medicine and Diseases of Children; C. F. Lohmeyer, Surgery; J. Rosenbach, Surgery; W. Krause, Physiology; E. F. W. Herbst, Physiology; H. Eichhorst, Medicine; T. Husemann, Materia Medica and Toxicology. In the Philosophical Faculty instruction is given by—*Ordinary Professors:* J. B. Listing, Physics; J. Reinke, Botany; F. Ehlers, Zoology; the Count of Solms-Laubach, Botany; H. Hübner, Chemistry. *Extraordinary Professors:* C. Boedecker, Pharmacy and Physiological Chemistry; L. von Uslar, Organic and Pharmaceutical Chemistry; E. Riecke, Experimental Physics; H. J. Esser, Veterinary Medicine; J. Post, Chemistry.

The following institutions are connected with the Medical Faculty: institutions for teaching animal and vegetable physiology and pharmacology, and pathology; the Ernst-August hospital, with medical, surgical, and ophthalmic clinics; a lying-in hospital; a psychiatric clinic in the Lunatic Asylum; a chemical laboratory; and a veterinary institute.

UNIVERSITY OF GREIFSWALD.

THE Medical Faculty of this University consists of the following professors, with teachers. *Ordinary Professors:* J. Budge, Anatomy; H. C. A. Pernice, Midwifery and Diseases of Women; F. Grohé, Pathological Anatomy; F. Mosler, Medicine; C. Hüter, Surgery; L. Landois, Physiology; R. Schirmer, Ophthalmic Surgery; A. Eulenburg, Materia Medica. *Extraordinary Professors:* C Eichstedt, Midwifery, Diseases of the Skin, and Syphilis; W. Häckermann, Forensic Medicine and Hygiene; R. Arndt, Psychology and Nervous Diseases; P. Vogt, Surgery; P. Krabler, Diseases of Children; F. Sommer, Anatomy. Instruction is given in the Philosophical Faculty by—*Ordinary Professors:* A. H. A. J. Münter, Botany; H. Limpricht, Chemistry; H. Schwanert, Chemistry and Pharmacy; A. Gerstäcker, Comparative Anatomy and Zoology. *Extraordinary Professor:* F. Baumstark, Chemistry.

The University Hospital contains medical, surgical, ophthalmic, and obstetric clinics.

UNIVERSITY OF HALLE.

THE following are the regulations for the medical degree.

1. Application for admission to the examinations must be made to the Dean, and at the same time must be presented: (*a*) a *curriculum vitæ;* (*b*) certificate of maturity from a gymnasium; (*c*) certificate of having passed a *tentamen physicum* at least two years previously; (*d*) certificates of leaving, from the Universities, over at least eight medical scholastic half years. Whoever is unable to present these certificates complete, and in the manner specified, must obtain a dispensation from the Chief Manager. 2. On making application, 360 *marks* must be paid to the Dean for the examinations and the promotion, besides which, 12 *marks* must be paid before the promotion to the Secretary of the University. 3. The examinations are held on two consecutive days, by the regular professors of the Faculty, on each of which days the result of the examination is made known to the candidate. 4. After passing his examination, the candidate must compose a scientific treatise on any subject he pleases in medical science, and deliver it to the Dean, together with the theses, to be publicly discussed, and the *curriculum vitæ* for examination and approval; the same when printed must fill at least two quires. The candidate must bear the cost of printing both the treatise and the diploma; but the diploma must be laid before the Dean for approval before being printed. Of the treatise, 172 copies must be delivered to the Secretary of the University at least three days before the promotion, and 40 copies of the diploma, when the Secretary will give a receipt in the name of the Dean, and

also for the 12 *marks* mentioned under No. 2. 5. The candidates have to request all the examiners personally to be present at the examination, likewise the members of the Faculty, when handing over the printed treatise for promotion. 6. In the application for promotion, the candidate solicts from the Dean, in a few preliminary words, permission to defend his treatise and the theses; and this takes place, then, against two previousiy appointed opponents; after which, those present are also called upon to join in the discussion. After the discussion is ended, the candidate begs the Dean to grant him the degree of Doctor; and this is done by administering the doctoral oath, and delivering the diploma. 7. Whoever fails to pass the examination, which includes all branches of medicine and surgery, will receive back from the fees paid 40¼ *marks;* the rest goes to the Faculty. 8. The time for taking the degree is left for the candidate. He must not, however, exceed one year from the time of passing the examination to the taking of the degree, or else he will have to submit to re-examination, and must pay over again all the fees.

The following professors, with several private teachers, constitute the Medical Faculty of this University. *Ordinary Professors:* L. Krahmer, Materia Medica and Forensic Medicine; Th. Weber, Medicine; R. Olshausen, Obstetrics and Gynæcology; Th. Ackerman, Pathology; H. Welcker, Anatomy; R. Volkmann, Surgery; J. Bernstein, Physiology; A. Gräfe, Ophthalmic Surgery; E. Hitzig, Psychological Medicine; K. J. Eberth, Histology. *Extraordinary Professors:* H. Schwartze, Diseases of the Ear; E. Kohlschütter, Medicine; H. Fritsch, Obstetrics and Gynæcology; E. Harnack, Animal Chemistry and Biology. In the Philosophical Faculty, instruction in Sciences connected with Medicine is given by—*Ordinary Professors:* C. Giebel, Zoology; G. Kraus, Botany. *Extraordinary Professors:* B. Rathke, Chemistry; E. Schmidt, Pharmaceutical Chemistry; A. Oberbeck, Physics.

The University library contains 100,000 volumes. Connected with the University are a chemical laboratory, a botanical garden, a zoological museum, an anatomical theatre and zootomical museum, a lying-in institution, a medico-chirurgical hospital, and physiological, pathological, and pharmaceutical laboratories.

UNIVERSITY OF HEIDELBERG.

THE following are the regulations to be observed for graduation in medicine in this University.

1. In applying for examination for the degree of Doctor, no evidence of previous study is required. 2. The same demands are made of all candidates; the only difference is that the oral examination is shortened if evidence be produced that the candidate has undergone, in the German empire, the *Staats-examen* for license to practise. 3. The subjects of examination are (1) Anatomy; (2) Physiology; (3) Pathological Anatomy; (4) Materia Medica (Pharmacognostics, Pharmacodynamics, and Toxicology); (5) Medicine; (6) Surgery; (7) Midwifery; (8) Ophthalmic Surgery. 4. A candidate may select one of these as the principal subject of his examination. All the other subjects then become secondary. 5. The examination is oral and written. The oral examination can only be conducted in the German language. 6. The written part of the examination consists of a medical dissertation in German or Latin, which must be given in before the oral examination. The dean of the Faculty of Medicine delivers the dissertation (or a scientific publication by the candidate, which may be substituted for it) to a reporter for his opinion. The reporter is authorised to hold a conversation with the candidate on the subject treated of in the work. In voting on the dissertation, the question is put whether it shall be allowed to be printed. If it be printed, the names of the dean for the time being, and of the reporter, must appear on the title-page. 7. The oral examination comprises the principal subject chosen by the candidate, and a certain number of the secondary subjects. The number and selection of the secondary subjects vary, according as the state-examination has or has not been passed. If proof be given that a state-examination has been passed in the German Empire, the candidate is examined in the principal subject, and in three of the secondary subjects, selected by himself. If there be no proof of a state-examination, he is examined in five secondary subjects. Of these, three are fixed—Anatomy, Physiology, and Pathological Anatomy; the other two may be chosen by the candidate. But if one of the three fixed subjects be chosen by the candidate as the principal subject, its place as a secondary subject is taken by another, selected by the candidate. 8. The duration of the oral examination depends on the number of subjects. The candidate is examined on the principal subject for thirty minutes, on each secondary one for fifteen or twenty minutes, according to the judgment of the examiners. 9. On the result of the entire examination, three notes are granted. The first (*summâ cum laude*) can only be granted when the dissertation has received the *imprimatur* of the Faculty. Even when the *imprimatur* has been received, the result of the oral examination may be such as to entitle the candidate to the second vote (*insigni cum laude*) or to the third (*cum laude*). 10. No oath is administered. When the diploma is delivered to the candidate by the dean, he has to give his hand in promise that he will bear his academicial dignity with honour. 11. The cost of the examination, exclusive of that of the diploma, amounts in all to 444 *marks* (about 22*l.* 5*s.*), which must be paid before the commencement of the examination. Of this sum, if the oral examination be not passed, 179 *marks* (about 9*l.*) are returned. 12. The diploma contains a record of the principal subject, the vote on the whole examination, and the judgment on the dissertation.

The Medical Faculty consists of the following professors, with several teachers. *Ordinary Professors:* F. Kehrer, Midwifery; W. Delffs, Chemistry; N. Friedreich, Medicine; C. Gegenbaur, Human and Comparative Anatomy; W. Kühne, Physiology and Histology; O. Becker, Ophthalmic Surgery; Th. von Dusch, Medicine; J. Arnold, Pathology; V. Czerny, Surgery; C. Fürstner, Psychological Medicine. *Honorary Professor:* A. Nuhn, Human and Comparative Anatomy. *Extraordinary Professors:* H. Oppenheimer, Materia Medica; S. Moos, Diseases of the Ears; F. Knauff, Forensic Medicine and Hygiene; H. Lossen, Surgery; A. Weil, Medicine and Diseases of the Skin, and Syphilis; R. Thoma, Pathological Anatomy; H. Braun, Surgery; F. Schultze, Diseases of the Nervous System; A. Jurasz, Diseases of the Throat. In the Philosophical Faculty, instruction in subjects connected with medicine is given by—*Ordinary Professors:* R. Bunsen, Chemistry; H. Kopp, Chemistry; G. Quincke, Experimental Physics; O. Bütschli, Zoology; E. Pfitzer, Botany. *Extraordinary Professors:* A. Bornträger, Phar-

macy; A. Horstmann, Chemistry; R. Kossmann, Zoology.

In connection with the University are a hospital, with medical, surgical, and ophthalmic clinics, an institution for diseases of the ear, a lying-in institution, anatomical, pathological, physiological, and zoological institutes, two chemical laboratories, and a botanical garden.

UNIVERSITY OF JENA.

THE Faculty of Medicine of this University grants a degree in Medicine, Surgery, and Obstetrics, the conditions for which are as follows:

1. Certificate to be given as to the extent of medical studies, and the period of time which has elapsed since their completion (at least six terms). 2. Satisfactory evidence as to character, from the neighbouring head office of police. 3. A written essay upon any subject of medical science, in German or Latin. The same composition may be given up, to be printed afterwards in the form of a dissertation. 4. Matriculation into this University. This is done when, upon fulfilment of the other conditions, the candidate himself makes his appearance. 5. Payment of examination and promotion fees must be made to the amount of 141 *thalers* (about £22). In case the examination is not passed, the promotion fees and 52 *thalers* are returned. The examination will be held in the German language only. It comprises all branches of medicine, viz.: Anatomy, Physiology, Histology, General Pathology, Pathological Anatomy, Special Pathology, Medicine, Therapeutics, Surgery, Obstetrics, etc. When the examination is passed, the student has to give in his dissertation, the subject of which he chooses for himself. The Faculty examines the work to see whether it is worth publication. A dispensation from the Latin or German disputation may be granted, when the examination is very satisfactorily passed. After the essay is printed, and also when the public disputation is over, the making out of the medical diploma takes place. The degree of doctor will only be granted in this University by the Faculty upon fulfilment of the above-named conditions.

The Medical Faculty of this University is constituted as follows. *Ordinary Professors:* F. Ried, Surgery; B. Schultze, Obstetrics; W. Müller, Pathology; W. Preyer, Physiology; O. Hertwig, Anatomy; H. Nothnagel, Medicine. *Honorary Professor:* M. Seidel, Materia Medica. *Extraordinary Professors:* L. Schillbach, Diseases of the Eye and Ear; F. Siebert, Psychology; C. Frommann, Physiology and Histology; C. Bardeleben, Anatomy; P. Fürbringer, Diseases of the Skin and Syphilis; O. Küstner, Gynæcology; H. Kuhnt, Ophthalmic Surgery. Subjects connected with Medicine are also taught in the Philosophical Faculty by—*Ordinary Professors:* G. A. Geuther, Chemistry; E. Häckel, Zoology. *Extraordinary Professors:* E. Reichardt, Chemistry; E. Hallier, Botany; R. Hertwig, Zoology; H. Gutzeit, Chemistry and Pharmacy.

Connected with the University are the Grand-Ducal hospital, lying-in institution, and lunatic asylum; anatomical, zoological, physiological, pathological, and chemical laboratories and museums, etc.

The fees are 5 *marks* a lecture for the whole of the session. Clinics and Demonstrations the same, as a rule.

UNIVERSITY OF KIEL.

THE following are the conditions for obtaining the medical degree:

1. The presentation on application of (*a*) a *curriculum vitæ;* (*b*) certificate of medical studies; (*c*) a scientific treatise; 2. A written examination; 3. A verbal examination before the Faculty; 4. Payment of 360 *marks.*

In this University the Medical Faculty consists of the following professors, with five private teachers. *Ordinary Professors:* C. C. T. Litzmann, Obstetrics and Gynæcology; F. Esmarch, Surgery; H. Quincke, Medicine; V. Hensen, Physiology; A. Heller, Pathology; C. Völckers, Diseases of the Eye; W. Flemming, Anatomy. *Extraordinary Professors:* J. Bockendahl, Forensic Medicine; G. J. F. Edlefsen, Medicine; F. Petersen, Surgery; A. Pansch, Anatomy; F. A. Falck, Materia Medica. Instruction is also given in the Philosophical Faculty by *Ordinary Professors:* C. Himly, Chemistry; K. Möbius, Zoology; A. Engler, Botany; A. Ladenburg, Chemistry.

There are a medico-chirurgical hospital, containing medical, surgical, and ophthalmic clinics, a lying-in institution, and laboratories and museums in connection with the several subjects taught.

UNIVERSITY OF KÖNISBERG.

THE Medical Faculty of this University consists of the following professors, with several private teachers. *Ordinary Professors:* W. von Wittich, Physiology; H. Hildebrandt, Obstetrics and Gynæcology; G. Schwalbe, Anatomy; E. Neumann, Pathology; C. Schönborn, Surgery; B. Naunyn, Medicine; J. Jacobson, Ophthalmic Surgery; M. Jaffe, Medical Chemistry. *Extraordinary Professors:* H. Bohn, Diseases of the Skin; A. W. Grünhagen, Histology; S. Samuel, Therapeutics; S. Pincus, Forensic Medicine; E. Berthold, Diseases of the Eye and Ear; F. R. A. Schneider, Surgery and Military Surgery; B. A. Benecke, Anatomy; E. Burow, Surgery; J. Caspary, Diseases of the Skin and Syphilis. Lectures are also given in the Philosophical Faculty by—*Ordinary Professors:* R. Caspary, Botany; H. Spirgatis, H. Ritthausen, and W. Lossen, Chemistry.

Connected with the University are anatomical, pathological, and physiological institutions, medical, surgical, obstetrical, and ophthalmic clinics; chemical and pharmaceutical laboratories, etc.

UNIVERSITY OF LEIPZIG.

THE Medical Faculty of this University consists of the following professors and a number of private teachers. *Ordinary Professors:* J. Radius, Hygiene and Pharmacology; F. Hofmann, Hygiene; E. Wagner, Medicine; C. S. F. Credé, Midwifery; J. Cohnheim, Pathological Anatomy; C. F. W. Ludwig, Physiology; C. Thiersch, Surgery; E. A. Coccius, Ophthalmic Surgery; W. His, Anatomy; C. W. Braune, Topographical Anatomy; W. Erb, Medicine. *Extraordinary Professors:* H. Sonnenkalb, Forensic Medicine and Hygiene; J. V. Carus, Zoology and Comparative Anatomy; A. Winter, Materia Medica; C. Hennig, Obstetrics; C. H. Reclam, Forensic Medicine and Hygiene; B. G. Schmidt, Surgery; E. F. Wenzel, Anatomy and Histology; J. O. L. Heubner, Medicine; E. R. Hagen, Otology, etc.; A. R. Brenner, Diseases of the Nervous System; P. E. Flechsig, Anatomy and Histology; E. Drechsel, Physiology; C. Weigert,

Medicine; A. Rauber, Anatomy. Instruction is also given in the Philosophical Faculty by—*Ordinary Professors:* W. Hankel, Physics; H. Kolbe, Chemistry; A. Schenck, Botany; R. Leuckart, Zoology; G. Wiedemann, Chemistry. *Extraordinary Professors:* H. Hirzel, Pharmacy; F. A. Zürn, Veterinary Medicine; A. Weddige, Chemistry.

In connection with the University are chemical, physico-chemical, and pathologico-chemical laboratories; a zoological institute, under the direction of Professor Leuckhardt; an anatomical institute, under Professor His; a physiological institute, under Professor Ludwig; and various clinics, etc.

UNIVERSITY OF MARBURG.

Any one wishing to proceed to the medical degree at this University must send in to the Dean of the Faculty of Medicine the following:

1. A *curriculum vitæ;* 2. A certificate of scientific studies; 3. A certificate of at least four years' study at a recognised University or Medical College; 4. A dissertation in the German language. If these be considered satisfactory by the Faculty, the candidate is then admitted to a *vivâ voce* examination in the German language. If the examination be satisfactorily passed, the dissertation must be printed, at the candidate's expense, and publicly defended. Three or four printed theses must also be sent in. The cost for the diploma is 330 *marks* (16*l.* 10*s.*)

The following are the professors in the Medical Faculty of this University. *Ordinary Professors:* C. F. von Heusinger, History of Medicine; H. Nasse, Physiology; W. Roser, Surgery; R. Böhm, Medicine; R. Dohrn, Midwifery; N. Lieberkühn, Anatomy; F. W. Beneke, Pathological Anatomy and General Pathology; E. Mannkopff, Pathology and Therapeutics; H. Schmidt-Rimpler, Ophthalmology; H. Kramer, Psychology; E. Külz, Physiology. *Extraordinary Professors:* G. Wagener, Anatomy; H. Horstmann, Forensic Medicine; H. Lahs, Midwifery. Lectures are also given in the Physiological Faculty by—*Ordinary Professors:* C. Zwenger, Pharmaceutical Chemistry; A. Wiegand, Botany; R. Greeff, Zoology; T. Zincke, Chemistry.

A hospital and various laboratories, etc., for practical instruction are connected with the University.

UNIVERSITY OF MUNICH.

In granting medical degrees at this University, a distinction is made between those candidates who have already passed a satisfactory public examination as Physicians before a German Commission of Examiners, and those who have not, be they natives or foreigners. From those candidates who have already passed the satisfactory German examination, nothing further is required in order to admit them to compete for the doctorate than the certificate of having passed such examination. The Faculty requires, however, the presentation of a dissertation, written in either the Latin or German language. This is delivered by the Dean to one of the members of the Faculty for examination and judgment, and with his judgment it is circulated amongst the Faculty. If the Faculty approve of it, then it is printed at the expense of the candidate, for the members of the Faculty.

Candidates, however, who have not passed the German 'Approbation-examination' for Physicians must, before being admitted to the doctorate examination, present to the Medical Faculty the following: 1. A gymnasial certificate, or at least such certificate as shows that the candidate has enjoyed a regular education; 2. Certificates of at least four years' attendance at an university or medical institution, and of attendance at the lectures on the principal branches of natural science and medicine; 3. Clinical certificates of the treatment of an internal surgical and eye complaint, and also assistance at a birth: 4. A certificate of the performance of an operation on the dead body, and the application of a bandage; 5. The candidate must then pass a two hours' verbal examination (in the German language) in the following branches, viz.: Anatomy, Physiology, General Pathology and Pathological Anatomy, Materia Medica, Therapeutics, Surgery, Midwifery, Hygiene, Diseases of the Eye; 6. The candidate has also to give in a dissertation, which must be examined by a member of the Faculty to see whether it is worthy of being printed. The printing may be dispensed with at the request of the candidate; 7. The fees for examination and promotion amount, for both kinds of candidates, to 100 *thalers*, 300 *marks*, or 175 *florins* (15*l.*)

The professorial staff of the Medical Faculty of this University is constituted as follows. *Ordinary Professors:* F. X. von Gietl, Medicine; F. C. von Rothmund, Surgery and Clinical Surgery; C. T. von Siebold, Zoology and Comparative Anatomy; F. Seitz, Materia Medica; L. A. Buchner, Pharmacy; M. von Pettenkofer, Hygiene; W. F. C. von Hecker, Midwifery; J. N. von Nussbaum, Surgery and Clinical Surgery; A. von Rothmund, Ophthalmic Surgery; C. von Voit, Physiology; H. von Ziemssen, Special Pathology and Therapeutics; B. von Gudden, Psychology; C. Kupffer, Anatomy; N. Rüdinger, Anatomy; O. Bollinger, Pathology and Hygiene. *Extraordinary Professors:* H. Ranke, Medicine; J. Amann, Midwifery; A. Martin, State Medicine; J. Oertel, Laryngoscopy; H. von Böck, Toxicology; J. Bauer, Medicine. Instruction is also given in the Philosophical Faculty by—*Ordinary Professors:* G. von Jolly, Experimental Physics; C. T. von Siebold, Comparative Anatomy; C. W. von Nägeli, Botany; L. Radlkofer, Botany; A. Bäyer, Chemistry. *Extraordinary Professors:* J. Ranke, Physiology; E. Fischer, Chemistry.

The University is situated in the Ludwigstrasse, is a new building, and contains a library consisting of 500,000 volumes. The chemical laboratory for hygiene is under the direction of Professor von Pettenkofer.

UNIVERSITY OF ROSTOCK.

Whoever wishes to graduate as 'Medicinæ, Chirurgiæ, et Artis Obstetriciæ Doctor' at this University, must apply to the Dean of the Medical Faculty, and deliver to him at the same time the following documents.

1. A certificate of having gone through the requisite course of studies in an university. 2. A certificate of examination, testifying to the ability of the candidate in the practice of medicine. 3. A treatise on any subject appertaining to medical science, composed by the candidate himself. A fee of 350 *marks* must be paid to the Faculty at the same time, of which two-thirds will be returned provided the treatise is not deemed satisfactory. The proof of having passed a satisfactory examination in Germany is, under the circumstances, satisfactory. If, however, this document should not appear satisfactory, or cannot be presented at all, the Faculty

require that the candidate be subjected to an examination by the Faculty which shall pretty nearly correspond to the German States' Examination. For this examination, an additional 200 *marks* must be paid to the Faculty. Only for special cases does the Faculty reserve to itself a special form of examination.

The inaugural dissertation must be the candidate's own, and he must append to his treatise a written declaration to that effect. It is not, however, required that the work be composed entirely without assistance; but in this case the literary resources, and also the name of him or them from whom he has received help, must be clearly and distinctly stated. Those essays are considered the best which contribute most to medical or scientific knowledge. After the dissertation has been stamped by the Dean in the name of the Faculty, the same must be printed, at the expense of the author, and at least 125 copies delivered to the Faculty. When the candidate has satisfactorily fulfilled the above conditions, he must introduce his essay, and read it publicly in the Aula, and defend it against any objections that may be made.

Promotions *in absentiâ* cannot be made, except only in the case of a *promotio honoris causâ* for distinguished service to medical science.

The Medical Faculty of this University consists of the following *Ordinary Professors:* H. Stannius; T. Thierfelder, Special Pathology and Therapeutics; H. R. Aubert, Physiology; W. von Zehender, Ophthalmology; F. Schatz, Midwifery; F. S. Merkel, Anatomy; O. Nasse, Chemistry; F. Trendelenburg, Surgery; A. Thierfelder, Pathological Anatomy. *Extraordinary Professor:* J. Uffelmann, Medicine. In the Philosophical Faculty, lectures on subjects connected with medicine are delivered by—*Ordinary Professors:* J. Roeper, Botany; O. Jacobsen, Chemistry; H. Grenacher, Comparative Anatomy and Zoology; and L. Matthiessen, Experimental Physics.

UNIVERSITY OF STRASBURG.

THE following is an extract from the regulations of the University of Strasburg relative to Degrees in Medicine.

Any person desirous of obtaining the degree of Doctor of Medicine can only be admitted to graduation on fulfilling the following conditions. *a.* If he belong to the German empire, he must have completed an academical four years' course of study of Medicine, or of the Natural Sciences. By an unanimous decision of the Faculty, one or two Sessions may be omitted. Foreigners desirous of graduating are not required to have passed through the four years' course if they produce proof of having received instruction equivalent to the course of study in the Medical Faculties of Germany. *b.* He must present a scientific essay (dissertation) composed by himself. *c.* He must undergo the Faculty examination. *d.* He must pay the prescribed fee of 240 *marks.* In his application for graduation, which must be addressed to the Dean, the candidate must produce the evidence referred to in *a*, and forward a scientific memoir on some department of medicine, with a written assurance that it is absolutely his own composition. If the dissertation receive the approval of the Faculty, the candidate is admitted to examination.

The examination is conducted by the ordinary professors, and consists, as a rule, of an oral theoretical examination in all important departments of medicine. If the candidate fail to give satisfaction in the oral examinations, he must, in order to obtain the degree of doctor, again undergo the examination after a time to be determined by the Faculty, but he is not required to present a second dissertation. In the case of candidates who have already passed the State examination, a colloquy before three members of the Faculty may, by the unanimous decision of the Faculty, be substituted for the oral examination.

Degrees in Medicine are not conferred on absent candidates.

If the dissertation be rejected, the candidate receives the whole fee back. If the dissertation be approved, but the candidate fail in the examination, 90 marks are returned to him, but, when he is again admitted to examination, only half that fee is required. After the Faculty examination has taken place and the dissertation has been printed and published, the candidate is formally admitted to the degree of Doctor by the issuing of a printed diploma, the names of the successful candidates being announced. The candidate has to bear the expense of printing the dissertation and of the diploma. There is no public ceremony, and no oath is administered.

Matriculation takes place on the first four Wednesdays of the season, from twelve to one o'clock. After the end of these four weeks, the rector can allow matriculation only on special grounds. Any one desirous of matriculating as a student, and attending the lectures and other instructions given in the University, must, on his arrival in Strasburg, communicate with the Secretary of the University, in order to be inscribed. Other persons desirous of attending the lectures must obtain permission from the respective teachers, and must then at once communicate with the Secretary of the University.

The following are the professors and teachers of the University. *Ordinary Professors:* W. Waldeyer, Human Anatomy and Embryology; J. G. Jössel, Anatomy; F. L. Goltz, Physiology; F. Hoppe-Seyler, Physiological and Pathological Chemistry; O. Schmiedeberg, Pharmacology and Therapeutics; F. von Recklinghausen, Pathological Anatomy and Physiology, and Histology; A. Kussmaul, Medicine and Clinical Medicine; A. Lücke, Surgery and Clinical Surgery; W. A. Freund, Obstetrics and Gynæcology; F. Wieger, History of Medicine, Diseases of the Skin, and Syphilis; A. Aubenas, Obstetrics and Gynæcology; F. Jolly, Psychiatry; L. Laqueur, Diseases of the Eye. *Extraordinary Professor:* O. Kohts, Medicine and Diseases of Children. There are also several *docents.* Instruction in subjects connected with Medical Science is also given in the Faculty of Mathematics and Natural Science by the following—*Ordinary Professors:* O. Schmidt, Comparative Anatomy; A. de Bary, Botany; A. Kundt, Experimental Physics; R. Fittig, Experimental Chemistry. *Extraordinary Professors:* F. Rose, Practical Chemistry; A. Götte, Zoology; C. F. Braun, Physics.

Connected with the University are institutions for the practical study of anatomy, experimental physiology, physiological chemistry, pathology, and pharmacology, and clinics for medicine, surgery, midwifery, mental diseases, diseases of the eye, and syphilis, and diseases of the skin.

UNIVERSITY OF TÜBINGEN.

The Faculty of Medicine here grants a degree in Medicine under the following conditions.

1. The candidate must send in with his application—*a.* A *curriculum vitæ; b.* A certificate of having gone through a thorough course of instruction at the Gymnasium or some equivalent institution; *c.* Proof of a sufficient study of medicine at an university, and certificates of having attended the lectures having reference to the subjects of examination. 2. The examination consists of a written and a subsequent verbal one. A legalised proof of having passed a satisfactory examination in medicine and surgery in a foreign country dispenses with the written examination, but not with the verbal one. In no case can a degree be granted *in absentiâ*. 3. In the written examination will be put one question in each of the following subjects: 1. Anatomy; 2. Physiology; 3. Materia Medica; 4. General Pathology and Therapeutics; 5. Two questions in Special Pathology and Therapeutics. In addition to which, if a Doctor's degree in Surgery be required, one question will be put on each of the following subjects: 1. General Surgery; 2. Special Surgery; 3. Surgical Operations; 4. Midwifery. 4. The fees amount to 300 *marks*, including the printing of the diploma, which fee must be paid on application. If the candidate be rejected at the written examination, and be not admitted to the verbal one, the whole of the fees will be returned. If he be rejected after the verbal one, only half will be returned. 5. The candidate must compose a dissertation under the presidency of a member of the Faculty, and get it printed; 250 copies are to be presented to the University. If, however, the essay be published either in a periodical or as a special pamphlet, 100 copies will suffice, but they must be provided with a special title-page. Only such candidates as have given numerous and satisfactory literary proofs of their capacity can be allowed to dispense with the composition.

The Medical Faculty of this University consists of the following professors, with private teachers. *Ordinary Professors:* V. von Bruns, Surgery; K. von Vierordt, Physiology; J. von Säxinger, Midwifery; C. von Liebermeister, Medicine and Materia Medica; T. H. Jürgensen, Medicine and Diseases of Children; A. Nagel, Ophthalmology; P. J. W. Henke, Anatomy; Pathology (vacant). *Extraordinary Professors:* O. Oesterlen, Forensic Medicine and Hygiene; P. Bruns, Surgery. Lectures are also given on subjects connected with Medicine in the Faculty of Natural Science by—*Ordinary Professors:* F. von Reusch, Experimental Physics; T. Eimer, Zoology; C. G. Hüfner, Chemistry; L. Meyer, Chemistry; W. Pfeffer, Botany; and *Extraordinary Professor:* — Hegelmaier, Botany.

A hospital and institutions for practical instruction are connected with this University.

UNIVERSITY OF WÜRZBURG.

Before being admitted to the examination for the Doctorate of Medicine, Surgery, and Midwifery, the candidate must pass the medical approbation examination, which consists in showing—by testimonials or certificates—that he has a good moral character, and that he has passed through four years' study at an University, six sessions of which must have been devoted to medical studies. Upon fulfilment of these conditions, the candidate will be admitted to a written and *vivâ voce* examination, before which, however, he must pay to the Faculty 300 *marks* (15*l.*) The written examination consists in the composition of an essay on some subject in theoretical or practical medicine, which dissertation must be handed to the Dean, who will give it to one of the examining professors to report on. It is customary for the dissertation to be printed. If the decision of the reporter with regard to the theme be unfavourable, admission to the *vivâ voce* examination is denied, and another theme must be composed and handed in at a future time. Should the second theme, however, be deemed unsatisfactory, the candidate will not be allowed to reappear. He then receives back all his fees except 30 *marks*. If the dissertation be approved by the Faculty, the candidate is admitted to a *vivâ voce* examination in the German language, which consists of the following subjects: Anatomy and Pathological Anatomy, Physiology, Pathology and Medicine, Special Therapeutics, Surgery, Obstetrics and Ophthalmology. A knowledge also of Psychology and State Medicine is required. After taking the examination oath, the result and standing of the examination is imparted to the candidate by the Dean—whether very good, good, or moderate.

When the candidate is unsuccessful at the *vivâ voce* examination, he receives back half the fees, and is allowed to present himself for examination again in six months' time by paying half the fees again. Only one more attempt is, however, allowed after the first rejection at the *vivâ voce* examination.

After successful examination, the candidate receives his diploma of doctor.

In this University, the Medical Faculty consists of the following professors, with several *docents*. *Ordinary Professors:* F. von Rinecker, Syphilis and Diseases of the Skin, also Psychiatry; A. von Kölliker, Anatomy; F. W. Scanzoni von Lichtenfels, Midwifery; E. von Bergmann, Surgery and Clinical Surgery; A. Fick, Physiology; C. Gerhardt, Medicine and Clinical Medicine, and Diseases of Children; G. E. Rindfleisch, Pathological Anatomy, General Pathology, and History of Medicine; J. Michel, Ophthalmic Surgery; A. Geigel, Clinical Medicine and Hygiene; M. Rossbach, Materia Medica. *Extraordinary Professors:* A. F. von Troltsch, Aural Surgery; W. Reubold, Forensic Medicine. Lectures are also given in the Philosophical Faculty by—*Ordinary Professors:* J. Sachs, Botany; J. Wislicenus, Chemistry; C. Semper, Zoology; F. Kohlrausch, Experimental Physics; and *Extraordinary Professor:* L. Medicus, Chemistry.

AUSTRO-HUNGARIAN EMPIRE.

GRADUATION IN MEDICINE.

The Universities of the Austro-Hungarian Empire which possess Medical Faculties and grant degrees in medicine are: Agram (Croatia), Gratz (Styria), Innsbrück (Tyrol), Cracow, Lemberg (Galicia), Pesth (Hungary), Prague (Bohemia), and Vienna.

All the Universities are under Government control, and the degree of Doctor of Medicine obtained at any of them alone gives the right to practise medicine in the empire.

The course of study required of candidates for the degree of Doctor of Medicine in the Universities of the Austrian Empire extends over five years, or five

winter and five summer terms or *semesters*. The following arrangement is recommended by the Government. (The first, third, fifth, seventh, and ninth are winter *semesters:* the others are summer *semesters.*) 1st *Semester:* Systematic Anatomy; Experimental Physics Inorganic Chemistry; General Botany; Dissections. 2nd *Semester:* Systematic Anatomy (second part); Experimental Physics (second part); Organic Chemistry; Special Botany; Mineralogy; Practical Introduction to Chemical Analysis; Practical Introduction to the Use of the Microscope. 3rd *Semester:* Physiology; Histology; Medical Chemistry; Zoology; Dissections. 4th *Semester:* Physiology (second part); Embryology; Exercises in Physiology; in Histology; and in Medical Chemistry. 5th *Semester:* General Pathology and Therapeutics; Pharmacology; Pathological Anatomy; Pathological Histology; *Post mortem* Examinations; Practical Introduction to the Physical Examination of Patients. 6th *Semester:* Pathological Anatomy (second part); Special Pathology, Therapeutics, and Clinic of Internal Diseases; Special Surgical Pathology, Therapeutics, and Clinic; *Post mortem* Examinations; Exercises in Pathological Histology. 7th *Semester:* Special Pathology, Therapeutics, and Clinic of Internal Diseases; Special Surgical Pathology, Therapeutics, and Clinic; Diseases of the Eye; Exercises in Surgical Anatomy; (Operations). 8th *Semester:* Internal Diseases; Surgery or Diseases of the Eye; Surgical Operations; (Surgical Anatomy). 9th *Semester:* Internal Diseases; Surgery; Theory and Practice of Obstetrics and Gynæcology; Forensic Medicine; (Exercises in Obstetric Operations); Medico-Legal Exercises. 10th *Semester:* Clinics of Diseases of Children; of Diseases of the Skin; and of Syphilis; (Obstetrics and Gynæcology); Exercises in Obstetric Operations; (Medico-Legal Exercises). Of the subjects included in brackets, one course only is required, which may be attended in either a winter or a summer term, at the option of the student.

Candidates for the degree of Doctor of Medicine are required to undergo three examinations (*rigorosen*). Before being admitted, the candidate must produce (*a*) his certificate of birth or baptism, and evidence (*b*) of having received a sufficient preliminary education in one of the institutions of the countries comprised in the empire, or, if he do not belong to any of these, evidence of having matriculated as an ordinary student in a Faculty of Medicine; (*c*) evidence of having attended lectures in a medical school during at least four sessions, and of having dissected during two sessions; (*d*) of having passed, at one of the Universities of the empire, three examinations, in Botany, Zoology, and Mineralogy. Before being admitted to the second examination, he must produce evidence of having been engaged five years in professional study, and of having studied Clinical Medicine and Clinical Surgery, each during four sessions, and Clinical Ophthalmology and Clinical Midwifery, each during at least one session; and of having passed the first examination.

The first examination embraces Physics, Chemistry, Anatomy, and Physiology. There is a practical examination on Anatomy and Physiology, and a theoretical examination on all four subjects.

The second examination includes General Pathology and Therapeutics, Pathological Anatomy and Histology, Pharmacology (pharmacodynamics, toxicology, and prescribing), and the Pathology and Therapeutics of internal diseases. The candidate is examined practically in Pathological Anatomy (with preparations and on the dead body), and in Medicine (at the bedside); and theoretically in all the subjects.

The third examination embraces Surgery, Ophthalmic Surgery, Midwifery and Diseases of Women, and Forensic Medicine. The examinations in Surgery, Ophthalmic Surgery, and Midwifery, are practical; and there are theoretical examinations in all the subjects.

All these examinations must take place at the same University. In very exceptional circumstances only is a candidate allowed to pass the second or third examination at another University than that at which he has passed the first.

The examinations are public, and are conducted by a President, the regular examiners, extraordinary examiners when required by the number of candidates, the Government commissioner, and at the second and third there is a co-examiner appointed by the Government. Each member of the commission examines for a quarter of an hour.

A candidate is not admitted to the theoretical examination unless he has satisfied the examiners in the practical one. If he fail at the practical examination, he may present himself again at the end of six months; if again rejected, six months must elapse before he can be again examined. A candidate rejected at the theoretical examination by one examiner only may be re-admitted to examination in the subject in which he is deficient, at the end of two months. If again rejected, he cannot be again examined in less than four months. If rejected at the theoretical examination by more than one examiner, he may re-appear a second and third time at intervals of six months. A rejected candidate can, however, be examined a third time, whether in practice or in theory, with the sanction of the minister of public instruction, and the consent of the college of professors; and if he then fail, he is debarred henceforth from obtaining a degree in medicine in any of the Universities of the empire.

The fee for the first examination is 55 florins, for the second 60 florins, and for the third 65 florins (Austrian). The promotion fees for the Doctorate amount to 60 Austrian florins. The total fee for the M.D. degree is about £23 of English money.

UNIVERSITY OF VIENNA.

IN this University, the Medical Faculty is constituted as follows. *Ordinary Professors:* E. von Brücke, Physiology; F. von Arlt, Ophthalmic Surgery; E. Albert, Practical and Clinical Surgery; C. Langer, Descriptive and Topographic Anatamy; C. R. Braun von Fernwald, Theory and Practice of Midwifery; H. von Bamberger, Special Medical Pathology, Therapeutics, and Clinical Medicine; Pathological Anatomy (vacant); A. Duchek, Special Medical Pathology and Therapeutics, and Clinical Medicine; J. Späth, Theory and Practice of Midwifery; C. Stellwag von Carion, Ophthalmic Surgery; Th. Billroth, Practical and Clinical Surgery; G. Braun, Midwifery (for Midwives); E. Hofmann, Forensic Medicine; C. Sigmund von Ilanor, Syphilology; C. Wedl, Histology; S. Stricker, Experimental and General Pathology and Therapeutics; Th. Meynert, Psychiatry and Nervous Diseases; A. E. Vogl, Pharmacology and Pharmacognosy; E. Ludwig, Chemistry; M. Kaposi, Diseases of the Skin, and Syphilis. *Extraordinary Professors:* E. Jäger von Jaxtha, Ophthalmic Surgery; J. Seegen,

Balneology; C. Cessner, Use of Instruments and Bandages; H. Zeissl, Syphilology; M. F. Röll, Contagious Diseases; L. Schlager, Psychiatry; F. Müller, Veterinary Medicine; L. Dittel, Surgery; H. Widerhofer, Diseases of Children; M. Leidesdorf, Psychiatry; M. Schwanda, Medical Physics; M. Benedikt, Electro-Therapeutics and Neuro-Pathology; S. Stern, Elementary Clinical Instruction; A. Politzer, Aural Surgery; J. Grüber, Aural Surgery; J. Weinlechner, Surgery; G. Löbel, Clinical Medicine; S. L. Schenk, Embryology; A. Drasche, Epidemiology; A. R. von Mosetig-Moorhof, Surgery; J. Nowak, Hygiene; C. Stoerk, Laryngoscopy; L. von Schrötter, Diseases of the Chest and Larynx; H. Auspitz, Diseases of the Skin and Syphilis; I. Neumann, Diseases of the Skin and Syphilis; F. Salzer, Surgery; S. Exner, Physiology; M. Rosenthal, Diseases of the Nervous System; C. Mayrhofer, Midwifery and Gynæcology; G. Wertheim, Diseases of the Skin and Syphilis; S. von Basch, Experimental Pathology; T. Puschmann, History of Medicine; J. Schnitzler, Medicine; R. Chrobak, Gynæcology; K. von Rokitansky, Pathology; L. Bandl, Obstetrics and Gynæcology; E. Zuckerkandl. The following private teachers have the title of professor; A. Reder, Syphilis and Diseases of the Skin; L. Mauthner, Ophthalmic Surgery; C. Böhm, Surgery; E. Stoffella, Special Pathology and Therapeutics; L. M. Pollitzer, Diseases of Children; W. Wonternitz, Medicine. There are also between eighty and ninety private teachers, adjuncts, and assistants. In the Philosophical Faculty, lectures on subjects connected with medicine are given by—*Ordinary Professors:* K. von Brühl, Zoology; L. K. Schmarda, Zoology; K. Claus, Zoology and Comparative Anatomy; J. Stefan, Physics; V. von Lang, Physics; J. Loschmidt, Physics and Chemistry; J. Wiesner, Vegetable Anatomy and Physiology; A. Lieben, Chemistry; L. Barth von Barthenau, Chemistry; A. Kerner von Marilaun, Botany; J. Böhm, Botany. *Extraordinary Professors:* H. W. Reichardt, Botany; F. Brauer, Chemistry; F. Exner, Physics; E. Lippmann, Chemistry; E. von Somaruga, Chemistry.

The General Hospital (*Allegemeine Krankenhaus*) is capable of accommodating about 2,000 patients. There are two medical clinics, under Professors Duchek and von Bamberger; two surgical clinics, one of which is under Professor Billroth; a clinic for Diseases of the Eye, under Professors von Arlt and Stellwag von Carion; and three clinics for Obstetrics—two for students being under the charge of Professors Carl Braun-Fernwald and Späth, and one for Midwives under Professor Gustav Braun. The clinics for Diseases of Women are under the charge of Professors Braun-Fernwald and Späth. There are also special clinics for Syphilis, under Professor Sigmund; for Laryngoscopy, under Professor Schrötter; for Diseases of Children, under Professor Widerhofer; for Psychology, under Professor Meynert; and for Otology, under Professor Grüber. A considerable portion of the school is also situated within the hospital; thus there are the Pathological Museum and *post mortem* room, under the direction of the professor of Pathology; the room for medico-legal necropsies, under Professor Hofmann; the Institute for Experimental Pathology, under the direction of Professor Stricker; and the Institute of Chemical Pathology, under Professor Ludwig. The Anatomical Institute and Dissecting Room, under the direction of Profession Langer; the Physiological Institute, where the Practical Physiology is carried on under Professor Brücke; the Materia Medica Museum, and the Medical Library are outside the hospital, in the Alsergrund.

The great clinics on medicine, surgery, etc., are conducted during the two sessions, from the middle of October to the middle of March, and from the middle of April to the end of July. They are under the immediate direction of the Professors of the Medical Faculty, and constitute, of course, an essential part of the curriculum of study for the ordinary Austrian student.

The special courses of instruction are most numerous during the regular academical sessions, but there are always some going on, even in August and September. They last usually from four to eight weeks. The courses are given for the most part by the private lecturers and the professors' assistants, and the material for them is derived from the wards of the clinical professors. For a six or eight weeks' course, the fee is usually from fifteen to twenty florins. The instruction in them is demonstrative or practical, involving the use of instruments and apparatus by the students themselves. Clinical instruction on children's diseases is given at the St. Anne's Hospital. This and many other of the courses are often attended by students for a second or even third time. A student desirous of occupying his time to the best advantage at Vienna must be prepared to expend a considerable sum in fees.

Vienna affords great opportunities for the study of pathological anatomy. There are separate *post mortem* rooms for the cases from the clinical wards, medico-legal cases, and the ordinary cases. At the two former, the clinical professor or assistant is usually in attendance. The examinations go on all the morning, there being sometimes as many as a dozen in one day.

Besides the General Hospital, Vienna possesses the Wieden Hospital (600 beds), the Rudolf Institution for the Sick (*K. K. Krankenhaus Rudolfstiftung*) (860 beds), the Lunatic Asylum, the General Polyclinic or Dispensary, the Lying-in Hospital, the Leopoldstädt Children's Hospital (90 beds), the Crown Prince Rudolf Children's Hospital (40 beds), St. Joseph's Children's Hospital at Wieden (100 beds), St. Anne's Children's Hospital (100 beds), etc.

UNIVERSITY OF BUDA-PESTH.

THE Medical Faculty of this University consists of the following professors. *Ordinary Professors:* J. Lenhossek, Anatomy; G. Mihalkevics, Anatomy; G. Scheuthauer, Pathological Anatomy; E. Jendrassik, Physiology; K. Balogh, Pharmacognosy and General Pathology; T. A. Lumnitzer, Surgery; T. Kézmarszky, Obstetrics; J. Wagner and F. Koranyi, Medicine and Clinical Medicine; J. Kovacs, Surgery; W. Schulek, Ophthalmic Surgery; J. N. Rupp, Forensic Medicine; J. Fodor, Hygiene; J. Bókai, Diseases of Children; T. Margó, Histology. *Extraordinary Professors:* L. Gebhardt, Diseases of the Chest; E. Poor, Diseases of the Skin; E. Navratil, Rhinoscopy and Laryngoscopy; T. Bakody, P. Plósz, Physiological and Pathological Chemistry; D. Nedelko, Dental Surgery; J. Böke, Aural Surgery; E. Schwimmer, Diseases of the Skin and Syphilis. There are also several *docents*.

UNIVERSITY OF CRACOW.

THE Medical Faculty of this University consists of the following professors, with several *docents*. *Ordi-*

nary Professors: E. Korczynski, Special Pathology and Therapeutics; J. Mikuliez, Surgery; G. Piotrowsky, Physiology and Histology; L. Teichmann, Descriptive Anatomy; M. Madurowicz von Jelita, Midwifery and Gynæcology; S. Janikowski, Forensic Medicine; L. Rydel, Ophthalmic Surgery; A. Stopczanski, Medical Chemistry; A. Adamkiewicz, General and Experimental Pathology; L. Blumenstock, Forensic and State Medicine. *Extraordinary Professors:* A Rosner, Diseases of the Skin and Syphilis; J. Oettinger, History of Medicine; M. L. Jakubowski, Diseases of Children; S. Domanski, Diseases of the Nervous System; T. Browicz, Pathological Anatomy. There are also several *privatdocents* and assistants.

UNIVERSITY OF GRATZ.

IN this University, the Medical Faculty consists of the following professors, with about 12 *docents. Ordinary Professors:* A. Schauenstein, Forensic Medicine; (Vacant) Descriptive and Topographical Anatomy; K. von Rzehaczek, Surgery; C. von Helly, Midwifery and Gynæcology; A. Rollett, Physiology and Histology; C. Blodig, Ophthalmic Surgery; O. Rembold, Medicine; H. Kundrat, Pathological Anatomy; C. von Schroff, Materia Medica and Therapeutics; C. B. Hoffmann, Medical Chemistry; V. von Ebner, Histology and Embryology; R. von Krafft-Ebing, Psychiatry. *Extraordinary Professors:* J. von Koch, Epidemic Diseases and Sanitary Police; E. Lipp, Diseases of the Skin; R. Klemensiewicz, Experimental and General Pathology; E. Börner, Obstetrics and Gynæcology.

Connected with the University are anatomical, physiological, pathological, and zoological institutes; medical, surgical, ophthalmic, obstetric, and gynæcological clinics; a laboratory for physiological and pathological chemistry; a chemical laboratory, etc. The hospitals are: the general hospital (700 beds); a lying-in hospital (120 beds); the town hospital (80 beds); a children's hospital (80 beds); and two infirmaries (245 beds).

UNIVERSITY OF INNSBRUCK.

THE following professors belong to the Medical Faculty. *Ordinary Professors:* C. Dantscher von Kollesberg, Anatomy; —Schauter (acting); Obstetrics and Gynæcology; A. Tschurtschenthaler, General Pathology and Pharmacology; M. von Vintschgau, Physiology; F. Schott, Pathological Anatomy; C. Nicoladoni, Clinical Surgery; I. Schnabel, Ophthalmic Surgery; P. von Rokitansky, Medicine. *Extraordinary Professors:* F. Wildner, Veterinary Medicine; J. Oellacher, Histology and Embryology; E. Lang, Syphilology and Dermatology; M. Dietl, Experimental Pathology; W. Löbisch, Medical Chemistry.

The ordinary laboratories, clinics, and other means of practical instruction, are possessed by this University. There are a general hospital (204 beds), and a lying-in hospital (130 beds).

UNIVERSITY OF KLAUSENBURG.

THE Medical Faculty of this University consists of the following professors. *Ordinary Professors:* A. Török, Anatomy; F. Klug, Physiology; A. Genersich, Pathology; A. Högyes, Pharmacy; S. Purjesz, Medicine; J. Brandt, Surgery; A. Szilágyi, Ophthalmic Surgery; J. Maizner, Obstetrics; A. Ajtai, Forensic Medicine; E. Geber, Diseases of the Skin and Syphilis. *Extraordinary Professor:* J. Ossikovsky, Chemistry and Toxicology. *Supplementary Professor:* L. Davida, Anatomy.

UNIVERSITY OF PRAGUE.

THE Medical Faculty of this University consists of the following professors, with several *docents. Ordinary Professors:* Th. Eiselt and A. Pribram, Clinical Medicine; C. Gussenbauer, Surgery and Clinical Surgery; J. Halla, Clinical Medicine; J. Streng, Midwifery; S. Strupi, Veterinary Medicine; J. Hasner von Artha, Ophthalmic Surgery; Ph. Knoll, General Pathology and Therapeutics; J. Maschka, State Medicine; E. Hering, Physiology; F. Weber von Ebenhof, Midwifery; C. H. Huppert, Medical Chemistry; E. Klebs, Pathological Anatomy; A. Breisky, Midwifery; C. Toldt, Anatomy and Histology. *Extraordinary Professors:* J. Lerch, Forensic, Physiological, and Pathological Chemistry; G. Ritter von Rittershain, Diseases of Children; J. Kaulich, Diseases of Children; S. Mayer, Physiology; P. J. Pick, Skin-Diseases and Syphilis; E. Zaufal, Aural Surgery; J. Fischel, Psychiatry; J. Eppinger, Pathological Anatomy; W. Weiss, Surgery; C. Weil, Surgery.

Connected with the University are an anatomical theatre; pathological, physiological, medico-chemical, and zoo-chemical institutes; medical, surgical, ophthalmic and dermatological clinics (one of the medical clinics being Bohemian); obstetric clinics for practitioners and for midwives, etc. The hospitals are: the general hospital (948 beds), with the affiliated hospital of the Bohemian sisters (220 beds); the Franz-Josef Children's Hospital (100 beds); the Israelite General Hospital (52 beds); the hospital of the Brothers of Mercy (166 beds); the hospital of the Elizabethan sisters (60 beds); the public lunatic asylum (1,348 beds); the lying-in hospital (322 beds for mothers and 176 for children).

SWITZERLAND.

GRADUATION IN MEDICINE.

IN Switzerland, degrees in Medicine are granted in the Universities of Basle, Berne, Geneva, and Zürich. These degrees do not confer a licence to practise, for which a separate examination is required.

UNIVERSITY OF BASLE.

THE degree of Doctor of Medicine, Surgery, and Midwifery, granted by this University, can only be obtained with the fulfilment of the following conditions.

1. Application for admission to the examination must be made to the Dean of the Faculty, in writing, enclosing: *a.* A 'curriculum vitæ'; *b.* The academical matriculation of this place; *c.* Certificates of attendance at the academical lectures; *d.* A certificate of conduct from the High School in which the candidate has made his principal studies; *e.* A scientific treatise on any subject he chooses within the sphere of medical or natural science. 2. The examination is partly written (*tentamen*) and partly verbal (*rigorosum*). 3. The written examination consists in the answering of five questions having reference to Anatomy, Physiology, Pathological Anatomy and Pathological Physiology, Special Pathology and Therapeutics, and Surgery. 4. In case of rejection, the Faculty can appoint a time for

a repetition of the examination, before which time the candidate cannot be re-examined. 5. The whole of the professors of the Faculty are invited to the verbal examination. The following are the subjects: Anatomy, Physiology, Pathological Anatomy and Physiology, Special Pathology and Therapeutics, Materia Medica, Surgery, Midwifery. 6. The examination by one examiner must not last longer than half an hour. 7. The degrees in which doctorships are granted are 'Summâ cum laude', 'Insigni cum laude', 'Magnâ cum laude', 'Cum laude', and 'Rité'. 8. In adjudicating on both the written and verbal examination, not only will the special knowledge in the respective branches be taken into consideration, but also the possession of a general scientific knowledge, and especially a comprehensive knowledge of Natural Science. 9. One hundred and twenty copies of the treatise must be delivered to the Faculty. 10. Promotions are not granted to applicants who have not passed the examinations here; but the Faculty can confer the degree of doctor on notable and eminent physicians *honoris causâ*. 11. The fees for the examination amount to 350 *francs*, viz., 100 for the *tentamen*, 200 for the *rigorosum*, and 50 for the promotion. 12. If the candidate be rejected after either examination, he forfeits the fees. The re-examination is free of charge.

The following are professors in the Medical Faculty of this University. *Ordinary Professors:* F. Miescher, senior, Pathological Anatomy; L. Rütimeyer, Comparative Anatomy and Zoology; A. Socin, Surgery and Clinical Surgery; H. Immermann, Medicine and Clinical Medicine; J. Kollmann, Anatomy; J. J. Bischoff, Obstetrics and Gynæcology; F. Miescher, junior, Physiology and Physical Chemistry; M. Roth, General Pathology and Pathological Anatomy; L. Wille, Psychiatry; H. Schiess, Ophthalmic Surgery. *Extraordinary Professors:* I. Hoppe, Therapeutics; E. Hagenbach-Burckhardt, Diseases of Children; R. Massini, Polyclinic and Prescribing; A. Burckhardt-Merian, Diseases of the Ear; C. Schulin, Histology. There are also several private teachers. Lectures on subjects connected with Medicine are given in the Mathematical and Scientific Department of the Philosophical Faculty by—*Ordinary Professors:* E. Hagenbach-Bischoff, Experimental Physics; J. Piccard, Chemistry; and H. Vöchting, Botany. *Extraordinary Professor:* F. Krafft, Chemistry.

Connected with the University are the town hospital, where clinics for medicine, surgery, diseases of the eye, mental diseases, and midwifery are conducted; a hospital for diseases of children, and institutions for practical instruction in physiology, pathology, chemistry, and botany.

UNIVERSITY OF BERNE.

Before admission to examination for the Degree in Medicine and Surgery, the candidate must submit to the Faculty of Medicine a manuscript dissertation of scientific value. If this be accepted, he must, after producing evidence of general, scientific, and medical education, be examined *vivâ voce* in Anatomy, Physiology, Pathological Anatomy, Legal Medicine, General Pathology and Medicine, Surgical Pathology and Surgery, Materia Medica, and Ophthalmology.

The Medical Faculty of this University is constituted of the following professors and about thirteen *docents*. *Ordinary Professors:* G. Valentin, Physiology; C. Emmert, Forensic Medicine and Hygiene; C. Aeby, Human and Comparative Anatomy; T. Kocher, Surgery; T. Langhaus, Pathological Anatomy; L. Lichtheim, Medicine; P. Müller, Midwifery; A. Vogt, Hygiene; E. Pflüger, Ophthalmic Surgery; M. von Nencki, Physiological Chemistry. *Extraordinary Professors:* E. Schärer, Psychiatry; R. Demme, Diseases of Children. There are several private teachers. Instruction in subjects connected with medicine is also given in the Mathematical and Scientific Department of the Philosophical Faculty by—*Ordinary Professors:* V. Schwarzenbach, Chemistry and Pharmacy; L. Fischer, Botany; A. Forster, Experimental Physics; T. Studer, Zoology.

Medical, surgical, obstetric, and special clinics, and physiological, pathological and clinical laboratories, etc., are connected with the University.

UNIVERSITY OF GENEVA.

The University of Geneva grants the degrees of Bachelor in Medical Science and Doctor of Medicine.

The following classes of persons are admitted as students in the Faculty of Medicine: 1. Bachelors in Letters; 2. Bachelors in Science; 3. Students who have attended during two years' lectures in the Section of Philosophy, and have undergone the examinations at the end of each year; 4. Pupils from the Classical Section of the Gymnasium, with certificates of Studies; 5. Swiss and strangers who give evidence of their studies by means of diplomas or certificates; 6. Persons who undergo satisfactory oral examinations in the subjects comprehended in the classical section of the Gymnasium. 7. Persons who furnish evidence that they have studied abroad, for a year at least, in a corresponding faculty, may be inscribed in the Faculty of Medicine.

The course of study is as follows: *First Year: Winter Session:* Botany (first part); Physics (first part); Comparative Anatomy or Zoology; Inorganic Chemistry; Practical Comparative Anatomy. *Summer Session:* Botany (second part); Physics (second part); Comparative Anatomy or Zoology; Organic Chemistry (first part); Practical Chemistry; Botanical Excursions. *Second Year: Winter Session:* Descriptive Anatomy (first part); Physiology (first part); Organic Chemistry (second part); Dissections. *Summer Session:* Descriptive Anatomy (second part); Physiology (second part); Practical Chemistry and Practical Comparative Anatomy. (Students are recommended to attend, in addition, courses of other subjects, such as Astronomy, Geography, Physics, Mineralogy, Geology, etc.) *Third Year: Winter Session:* Descriptive Anatomy (third part); Normal Histology; Dissection. *Summer Session:* Regional Anatomy; Embryogeny. Supplementary courses on subjects of the preceding years, on which the student's knowledge is weak; Practical Physiology, Histology, Comparative Anatomy, and Chemistry. (The examination for Bachelor in Medical Sciences is now undergone.) *Fourth Year: Winter Session:* General Pathology; Internal Pathology; External Pathology; Dissection of Regions; Medical and Surgical Hospital Practice. *Summer Session:* Special Pathological Anatomy; Pathological Histology; Internal Pathology; External Pathology; Pharmacology; Medical and Surgical Hospital Practice; Exercises in the Laboratory of Pathological Histology. *Fifth Year: Winter Session:* Therapeutics; Hygiene; Legal Medicine; Theory of Obstetrics; Internal Pathology;

External Pathology and Operations; Medical and Surgical Hospital Practice. *Summer Session:* Therapeutics; Legal Medicine; Internal Pathology; External Pathology; Medical and Surgical Hospital Practice; Operations. *Sixth Year: Winter and Summer Sessions:* Medical, Surgical, and Obstetrical Hospital Practice; Polyclinic; Ophthalmology; Psychology, etc. Repetitions preparatory to the examination for the Doctorate.

Persons who have satisfied the conditions laid down regarding the admission of students to the Faculty of Medicine may become candidates for the degree of Bachelor in Medical Science. Students who have undergone the recognised annual examinations in the Faculty of Medicine or of Sciences are exempt from oral examinations in the subjects in which they have already been examined; provided that the examinations have been undergone not more than two years previously. Persons who produce diplomas or certificates giving evidence of their studies may be exempted from further examinations in the subjects in which they have already passed.

The following may become candidates for the degree of Doctor of Medicine: 1. Bachelors in Medical Science; 2. Persons who produce diplomas or certificates indicating that they have gone through an equivalent course of study. There are five examinations for the degree of Doctor of Medicine. *First Examination:* Human Anatomy and Histology; Physiology; Pathological Anatomy and General Pathology; a Necropsy, for which one hour is allowed; making an Anatomical Preparation, for which four hours are allowed. *Second Examination:* Medicine; Surgery; Operative Surgery; three Operations, and Application of Bandages. *Third Examination:* Hygiene; Therapeutics; Materia Medica and Pharmacology; Legal Medicine; a Medico-Legal Report on a real or supposed case, for which one hour is allowed. *Fourth Examination:* Clinical Examination of two medical and two surgical patients and of one case of labour (fifteen minutes being allowed for each case); Obstetrics, with operations on the mannikin; Discussion on each Clinical Case; Written Commentary on a Medical and a Surgical Case, two hours being allowed. *Fifth Examination:* Defence of a printed Dissertation, in the French language, on a subject in medical science chosen by the candidate, and previously communicated to the Faculty.

The examinations are public. Those for the degree of Bachelor are held at the beginning and end of the University year, and in the interval between the sessions. Application for admission must be made to the Dean of Faculty of Medicine eight days before the day of examination. The examinations for the degree of Doctor take place, on the demand of the candidates, at times determined by the Faculty.

Before being admitted to examination, each candidate pays to the beadle 40 *francs;* and after the last examination, 100 *francs* must be paid to the Faculty of Medicine. In case of unsatisfactory examination, half of the first fee is returned, and the second is not paid.

UNIVERSITY OF ZURICH.

THE following are the regulations for the degree of Doctor of Medicine.

1. In order to obtain the degree of Doctor of Medicine, the candidate must send to the Dean a written memorial, accompanied by (*a*) evidence of attendance on lectures of Physics, Chemistry, Botany, Zoology, and Medical Subjects; (*b*) a dissertation on some subject in medical science, which, after approval, the candidate must have printed at his own expense.

2. The dissertation is delivered by the Dean for examination to the teacher of the subject of which it treats, or to the member of the Faculty at whose suggestion it has been composed. A recommendatory opinion of the first examiner decides its acceptance; in this case, his name appears on the title when it is printed. If the first opinion be doubtful or unfavourable, the thesis must be circulated among all the members of the Faculty, and is only accepted if two-thirds of them give their written votes in its favour.

3. When the dissertation is approved, the candidate is admitted to examination for the degree. The first part is written, and the candidate has to answer two questions drawn by lot, one on Anatomy and Physiology, the other on Pathology and Therapeutics, Surgery, or Midwifery. The answers are circulated among the members of the Faculty, who, after examining them, express in writing their determination (by a simple majority) whether the candidate shall be admitted to the second (oral) examination. The oral examination comprises the above-named subjects, and also General Anatomy, Pathological Anatomy, Materia Medica, and Ophthalmic Medicine. The votes of two-thirds of the members of the Faculty present is necessary for the passing of this examination.

4. After the examination has been passed and two hundred printed copies of the dissertation have been delivered, an official diploma is delivered in duplicate to the candidate; all other ceremonies are dispensed with.

5. The fee consists of 350 *francs* (£14), and 15 *francs* to the bedell; it is paid before the oral examination (if this be remitted, before graduation). There is no additional fee if it be necessary to repeat the examination. The fee is not returned if the candidate be definitely rejected. The sum of 100 *francs* is remitted to candidates who already possess a recognised diploma; and, in such cases, the Faculty may, by a majority of two-thirds, agree to omit the oral examination.

6. The faculty has the power of granting the diploma of doctor *honoris causâ* for distinguished services to medicine.

The Medical Faculty consists of the following Professors, with several docents: *Ordinary Professors*—H. Meyer, Human Anatomy; H. Frey, Comparative Anatomy, and Zoology; U. Krönlein, Surgery and Clinical Surgery; L. Hermann, Physiology; E. Ziegler, Pathology; G. Huguenin, Medicine; F. Horner, Ophthalmic Surgery; O. Wyss, Diseases of Children; E. Frankenhäuser, Obstetrics and Gynæcology; A. Forel, Mental Diseases. *Extraordinary Professor*—H. Spöndly, Obstetric Medicine. Lectures are given in the Philosophical Faculty by *Ordinary Professors*—V. Merz, Chemistry; W. Weith, Chemistry; C. Cramer, Botany: *Extraordinary Professors*—J. R. Hofmeister, Experimental Physics; A. Dudel-Port, Chemistry. A Hospital, Lying-in Hospital, Children's Hospital, Pathological, Physiological, and Chemical Laboratories, are connected with the University.

THE LICENCE TO PRACTISE MEDICINE.

The following are the regulations for the licence to practise medicine in Switzerland. One licensing body examines at Geneva, and the other at Basle, Berne, and Zürich; both have the same regulations, and grant the licence to practice in all parts of the republic.

There are two examinations, preliminary and final. At Geneva, candidates are admitted to the preliminary examination on producing one of the following certificates: 1. Bachelier ès lettres; 2. Bachelier ès sciences; 3. Certificates of having passed two examinations in the Section of Philosophy at Geneva, and of having previously taken not less than twenty hours per week of studies. 4. Certificates of foreign studies at the Classical Section of the Gymnasium at Geneva; 5. Certificates of foreign studies equivalent to those named above. At the Amalgamated Board of Basle, Berne, ånd Zürich, candidates must produce evidence of complete and satisfactory studies in a public school; and of attendance on courses of Anatomy, Chemistry, Physics, Physiology, Practical Physiology, and six months' work in a Chemical Laboratory.

The examination is written and oral. The written part consists in producing two dissertations, one in Physics or Chemistry, the other in Anatomy or Physiology. The oral examination comprises Botany, Zoology, and Comparative Anatomy, Physics, Anatomy, and Physiology. At Geneva, candidates who have passed this examination are entitled to the designation of Bachelor of Medical Science.

In order to be admitted to the Final Examination for the Licence, candidates at Geneva must produce the certificate of Bachelor of Medical Science, and diplomas and certificates obtained after equivalent studies and examinations elsewhere. At the other Board, they must pruduce evidence of having passed the Preliminary Examination, and of having attended the following academic courses: Pathological Anatomy, Medicine, Practical Surgery and Bandaging (six months), Clinical Medicine and Clinical Surgery (each three sessions), Clinical Midwifery (two sessions), and Clinical Ophthalmic Medicine (one session).

The examination is written, practical, and oral. The written and practical part consists of—1. Examination of two Medical and two Surgical cases, and one of Midwifery, in the presence of two examiners; 2. Written opinion of one of two Medical and two Surgical cases; 3. A *post mortem* Examination, and opinion on the same; 4. Performance of two Operations: one the tying of an artery; the other according to the judgment of the examiners. The *vivâ voce* examination comprises: 1. General Pathology and Pathological Anatomy; 2. Special Pathology and Therapeutics; 3. Hygiene; 4. Pharmacology; 5. Surgery; 6. Topographical Anatomy, with Operations; 7. Ophthalmology; 8. Midwifery; 9. Ordinary Medical Practice.

DENMARK.

MEDICAL EDUCATION & GRADUATION.

THE study of Medicine at the University of Copenhagen is open to any student who has matriculated there or in foreign Universities; but only Danish subjects can obtain through examination the right to practise as medical men in the country.

The course of study is divided into three parts, namely, an introductory and two principal courses.

1. The introductory part consists of Botany (with especial regard to medicinal plants), Physics, Zoology, and Chemistry, theoretical and practical. The student has to submit to a preliminary examination on these subjects, and he can then enter as a pupil of one of the hospitals, where he must attend in a fixed order, and for a certain time, the various wards.

2. The second course comprises Anatomy, Physiology, Pharmacology, and Dissections, in which the student has to submit to an examination.

3. The final course consists of the following: Theoretical Surgery, Clinical Surgery, Operative Surgery, Theory of Medicine, Clinical Medicine, Pathological Anatomy, General Pathology, Forensic Medicine, and Obstetric Medicine. The student is examined on these subjects, and has to present a written thesis in Medicine, and one on Surgery. Before the student can pass his examination in this concluding course, he must present a certificate showing that he has gone through a half-yearly Clinical course of study under the chief Physicians at the hospital in Surgery, Medicine, Skin-Diseases, and Syphilis; and a shorter course at the Lying-in Institution in Obstetrics and Diseases of Children.

When these examinations are taken, the obligatory course of study is concluded by a residence at the Lying-in Institution, in order to obtain a practical knowledge of operations in cases of abnormal labours. The candidate who has passed his examination has now a right to practise medicine; but the majority of candidates, before commencing to practise, endeavour to obtain an appointment at one of the hospitals, where they do duty during two years in a subordinate position. The entire course of study generally covers a period of from six to seven years.

In order to obtain the degree of Doctor of Medicine, the candidate has to prepare and submit to the Medical Faculty a treatise on a medical subject chosen by himself. If it be accepted by the Faculty, it is printed, and must be defended by the author publicly at the University, when at least two professors of the Medical Faculty appear as opponents. At most only about 10 per cent. of the medical men in Denmark endeavour to obtain this degree.

Among other means for aiding the labours of the student at the University are: The Botanical Gardens, a Zoological Museum, a Chemical Laboratory, a Collection of Physical Instruments, an Anatomical Museum, Dissecting Rooms (Physiological Collection and Laboratory), Pharmacological Collection, Collection of Surgical Instruments, Pathological Museum, the Copenhagen hospitals and the Lying-in Institution.

No entrance fees are demanded, and all the lectures are free to the students. The fees payable in respect of the several examinations amount in all to 60 *Kroner* (about £3 10*s*.) The expenses in connection with obtaining the degree of Doctor of Medicine amount to 160 *Kroner* (about £9).

Ten professors are attached to the University, namely: two in Medicine (Theoretical and Clinical), two in Surgery (Theoretical and Clinical), one in Pathological Anatomy, one in Obstetric Medicine and Diseases of Women and Children, one in Normal Anatomy, one in Physiology, one in Pharmacology and Materia Medica, one in Forensic Medi-

cine, Hygiene, and Psychiatry, beside a permanent *docent* for Syphilis and Skin-Diseases.

In addition, lectures are given by the chief physicians attached to the various wards of the hospitals. Six of the professors of the University act as chief physicians in the Copenhagen hospitals.

SWEDEN.

MEDICAL EDUCATION.

THERE are three medical institutions in Sweden which confer licences to practise, viz., in the Universities of Upsala and Lund, and the Karolina Medico-Chirurgical Institute or Academy of Medicine in Stockholm. The Universities also confer the degree of Doctor of Medicine. A Medical School, with professors of the various branches of medical science, is connected with each.

The three institutions possess museums of normal and pathological anatomy, collections of chemical and pharmaceutical preparations and drugs, of surgical and obstetric instruments, physiological and pathological laboratories, etc.

Upsala possesses a hospital of 150 beds, which is entirely at the disposal of the University for the purpose of clinical teaching. The professors of medicine and surgery are *ex officio* medical officers of the hospital. Of the 150 beds, 100 or a few more are generally occupied, and are divided among medical, surgical, syphilitic and obstetric cases.

In Lund, clinical instruction is given in the State Hospital, and also in the University Hospital. In the latter, there are 80 beds for medical and 80 for surgical cases, with 67 beds in the syphilitic and 8 in the obstetric departments. Of these, 40 beds in the medical and 40 in the surgical department are appropriated to clinical instruction. The obstetric department is also clinical. Clinical instruction in the diseases of the eye is also given.

In Stockholm, the pupils of the Karolina Institution receive clinical instruction at the Seraphim Hospital, the Children's and Lying-in Hospitals, the Town and State Lock Hospital, and the Lunatic Asylum at Konradsberg.

At the Seraphim Hospital, there are two medical and two surgical wards, under the charge of the ordinary and adjunct professors of medicine and surgery; and also a small gynæcological ward. It contains about 300 beds. An ophthalmic clinic is comprised in the surgical department; and the gynæcological clinic is attached to the medical.

The Lying-in Hospital or Obstetric Clinic, can accommodate thirty patients; twenty beds are generally occupied. The professor of obstetrics in the Karolina Institution is *ex officio* chief physician.

The whole of the cases in the General Orphan Hospital are available for clinical instruction. The daily number of infants under one year old in the institution is from 100 to 200; sometimes it has been as high as 240. Of these 10 or 12 per cent. are generally on the sick-list. There are also about 80 children between one and fifteen years of age. In addition, from 1,600 to 2,000 are attended yearly as out-patients. Clinical Instruction is given by the professor of diseases of children for eight months in the year, and four months by his adjunct.

The Town and State Lock Hospital has 180 beds, of which, on an average, 140 are occupied daily.

The Hospital for the Insane at Konradsberg has 220 beds, which are all available for clinical instruction. The professor of psychological medicine in the Karolina Institute is the chief physician.

LICENCE AND DEGREE IN MEDICINE.

No one can practise medicine in Sweden who has not obtained a licence from one of the three boards. The examinations for the licence consist of two parts. The first, for the Diploma of Candidate in Medicine (analogous to *Officier de Santé* in France), embraces Anatomy, Physiology, Medical Chemistry, Pharmacology, General Pathology, and History of Medicine. The candidate must, after passing the maturity examination on leaving a lyceum, have undergone a preliminary (medico-philosophical) examination in Botany, Zoology, Chemistry, and Physics, or have passed an examination as candidate in Philosophy. He must also have followed the practical laboratory courses of Chemistry, Physiology, and normal and morbid Anatomy. The examination for the licence comprises Medicine, Diseases of Children, Surgery, Obstetrics and Gynæcology, Pathological Anatomy, and Forensic Medicine. The candidate must have passed the examination for Candidate in Medicine, and must subsequently have attended the clinics of Medicine, Surgery, Obstetric Medicine, Diseases of Children, Syphilis, and Diseases of the Mind; and must have obtained a competent knowledge of Pharmacy. Attendance on oral lectures is not obligatory.

The degree of Doctor of Medicine is conferred by the Universities of Lund and Upsala on Licentiates of those Universities and of the Academy at Stockholm, on their presenting and defending a thesis. Attendance on lectures is obligatory for the Degree.

NORWAY.

MEDICAL EDUCATION.

IN the University of Christiania, which is the only School of Medicine in Norway, lectures are delivered on the following subjects: Surgery, Ophthalmic Surgery, Physiology, Midwifery and Diseases of Women and Children, Descriptive Anatomy, Forensic Medicine, Pathology and Therapeutics, Hygiene, Materia Medica, General Pathology and Pathological Anatomy, Surgical Pathology, Zoology, and Chemistry, Clinical instruction is given in the General Hospital on Surgery, Ophthalmic Surgery, Medicine, Diseases of the Skin and Syphilis; at the Lying-in and Children's Hospital, on the Diseases of Women and Children; at the Ganstead Asylum and at the Christiania Lunatic Asylum, on Mental Diseases; and in the Town Hospital, on Chronic Diseases. Practical instruction is also given in Chemistry, Anatomy, and Botany.

LICENSES AND DEGREES.

Before entering on the study of medicine, the candidate has to pass two preliminary examinations: one in Arts, including Norwegian, Latin, Greek, French, German, English, Mathematics, Geography, and History; and one in Philosophy, including Geometry, Zoology, Botany, Astronomy, and the elements of Chemistry and Physics. Having passed these, he is admitted to matriculation, and afterwards studies Medicine nearly seven years.

There are three professional examinations. The first is held two and a half years after Matriculation,

in Anatomy, Dissections, the use of the Microscope, Physiology, and Medical Physics. The second, held three and a half years after the first, includes Pharmacology, Toxicology, Medicine, Therapeutics, General Pathology, Pathological Anatomy, Surgery, Ophthalmic Surgery, Skin-Diseases, and Syphilis. The third examination, held about a year after the second, comprises Surgical Anatomy, Surgery, Operative Surgery, Obstetrics, and Gynæcology, Diseases of Children, Forensic Medicine, Hygiene, and a Practical Examination in Medicine and Surgery. Practical work in the Hospital Wards is also obligatory.

On passing the final examination, the candidate becomes a physician, and obtains the right to practise. To obtain the degree of Doctor, he must pass a further examination, and defend a thesis.

HOLLAND.

DEGREE OF DOCTOR OF MEDICINE.

The degree of Doctor of Medicine is granted in Holland by the Universities of Groningen, Leyden, and Utrecht. Candidates for matriculation must produce evidence of gymnasial maturity, or undergo an equivalent examination. The course of study, including laboratory work and hospital practice, extends over six years. The final examination embraces all the subjects of medical study and the presentation and defence of a thesis. The degree does not grant a license to practise.

STATE EXAMINATION.

This examination is conducted by eight professors, appointed annually and paid by the government. The applicant for admission must be a Doctor of Medicine of some University, or possess a certificate of gymnasial maturity, or pass a preliminary literary and philosophical examination. The course of medical study must extend over at least six terms. The medical examination includes General and Special Pathology, Pharmacology, Morbid Anatomy, Medical Jurisprudence, Clinical Medicine, Clinical Surgery, and Obstetrics.

BELGIUM.

GRADUATION IN MEDICINE.

DEGREES in Medicine are granted by the Universities of Brussels, Ghent, Liège, and Louvain. The Universities of Brussels and Louvain confer only scientific titles, without license to practise; the degrees of the other two, when legalised by a Government commission, give the right of practice in Belgium.

UNIVERSITY OF BRUSSELS.

BY the regulations of the University of Brussels, British and other medical practitioners, provided with proper qualifications, are admitted to examination before the Faculty for the degree of M.D. Residence is not required from such as are unable to absent themselves long by reason of their professional occupations.

Candidates must come in person and have their names inscribed in the books of the University. The fees are, for inscription of name, 215 fr. (8*l.* 12*s.*); for examinations, 315 fr. (12*l.* 12*s.*); for registration of diploma, 10 fr. (8*s.*); total, 540 fr. (21*l.* 12*s.*) The examination consists of three parts. 1. General Therapeutics, including Pharmaco-dynamics (proportions of doses), Special Pathology and Therapeutics of Internal Diseases, General Pathology, and Pathological Anatomy. 2. Surgical Pathology, Ophthalmic Surgery, Theory of Midwifery, Public and Private Hygiene, Medical Jurisprudence. Examination at the Hospital of one or two patients under Medical and Surgical Treatment; Examination in Midwifery, consisting in Obstetrical Operations on the *mannequin* (model of pelvis); Examination in Operative Surgery, consisting of some of the usual operations on the dead subject, such as amputation, ligature of an artery, etc.

Great importance is attached to practical knowledge, but candidates must also prove that they possess positive theoretical science.

Examinations take place at any time between October 15th and June 20th, except during Christmas and Easter. They are *vivâ voce* and written, but candidates may be exempted from the former and confine themselves to the written tests by paying an additional fee of £1 for each test. Candidates must exhibit their qualifications or diplomas.

The three examinations may be got through in a week, allowing a day's interval between each two tests. Saturday is the most eligible day for arriving, for candidates for whom time is an object. The delay of a week is, however, never exceeded by more than a day or two.

The examinations are conducted in English through the medium of an interpreter, for such candidates as are not familiar with the French language.

Candidates who are not foreign qualified medical men must undergo the above-mentioned examinations, and also an examination in Anatomy, Physiology, and Histology, and must produce a degree in Arts or Science from a recognised University, or pass a preliminary examination; they must also have attended for five years the lectures in a medical college, or for three years the medical and surgical practice of a hospital.

UNIVERSITY OF GHENT.

A CANDIDATE for matriculation at this University must be a graduate in Arts of some University, or must pass a preliminary examination. He must then attend for two years a scientific course, including, Psychology, Chemistry, Physics, Botany, Zoology, and Mineralogy, and at the end of the time pass an examination in these subjects. After this, he must attend lectures for five years, and hospital practice for three years.

The following examinations must be passed: 1. At the end of the second year of medical study, in Descriptive Anatomy, Histology, Physiology, Pharmacology, and Comparative Anatomy; 2. At the end of the fourth year, in General Pathology, Therapeutics, Theory and Practice of Medicine, and Morbid Anatomy; 3. At the end of the fifth year, in Theory and Practice of Surgery and in Obstetrics. The final examination for the Doctorate includes the general subjects of medical study, with practical examinations in Clinical Medicine, Clinical Surgery, Obstetrics, and Operative Surgery. Candidates who have attended the requisite lectures and hospital practice elsewhere are admitted to the final examination if they possess a degree in Arts or pass the matriculation examination of the University.

UNIVERSITY OF LIÈGE.

THE University grants a degree in Medicine, Surgery, and Midwifery, which can only be obtained after passing three examinations, in the French language, in natural sciences and medical subjects.

The first examination includes the following subjects: General Chemistry, Logic, Psychology, Moral Philosophy, Experimental Physics, Elements of Zoology, Elements of Botany (comprising the medical category), Elementary Geology and Mineralogy. This is called the examination for candidates in natural sciences.

The second examination, which is for candidates in medicine, includes Elements of Comparative Anatomy, Descriptive and Regional Anatomy, Human Physiology, and Pharmacology.

The third examination, which, when successfully passed, entitles the candidate to the Doctorate, includes the following subjects, viz., General Pathology, Pathological Anatomy, Special Pathology, and Therapeutics. Mental Maladies, General Therapeutics, Surgical Pathology and Ophthalmology, Theory and Practice of Midwifery (including operations), Public Hygiene, Legal Medicine, Clinical Medicine, Clinical Surgery, Surgical Operations.

The fees are—for the first examination, 80 *fr.*; second, 40 *fr.*; doctor in medicine, 240 *fr.*; total, 300 *fr.*, or about £15.

UNIVERSITY OF LOUVAIN.

THIS University, before granting the usual degree, insists upon compliance with the following conditions, viz.: 1. An examination in one group (or branch) of the sciences, Mathematics, Physico-chemics, or Natural Sciences. 2. An examination upon all medical subjects, in the French language.

Candidates for the degree of Doctor must have studied medicine five years at a recognised medical college or university, and have attended hospital practice for three years, at a recognised hospital.

The University of Louvain consists of several colleges, and the buildings of the Halles, and contains a library of 70,000 volumes.

ITALY.

GRADUATION IN MEDICINE.

THE Italian universities at which degrees in medicine are granted are Bologna, Catania, Padua, Palermo, Pavia, Pisa, Rome, Siena, and Turin. There is also a preparatory School of Medicine at Ferrara.

The regulations for Graduation in Medicine in the Universities of Italy are as follows.

1. The Medico-Chirurgical Faculty has the duty of giving instruction in all subjects relating to medicine and surgery, promoting the cultivation of all that is known in that field, and qualifying for the exercise of the medical profession in its various branches. 2. The course of medical and surgical study extends over six years, at the end of which free license to practise is granted. 3. The following courses of instruction are obligatory: General Chemistry, Organic and Inorganic; Botany; Zoology, with Comparative Anatomy and Physiology; Experimental Physics; Normal Human Anatomy (*i.e.*, Histology, Descriptive and Topographic Anatomy, and Dissection); Human Physiology; General Pathology; Pathological Anatomy (demonstrations and exercises); Materia Medica and Experimental Pharmacology; Special Medical Pathology (or Principles and Practice of Medicine); Special Surgical Pathology (Surgery); Clinical Medicine and Exercises in Semeiotics; Clinical and Operative Surgery; Theory and Practice of Ophthalmic Surgery; Theory and Practice of Diseases of the Skin and Syphilis; Midwifery and Clinical Midwifery; Forensic Medicine and Public Hygiene; Theoretical and Clinical Psychiatry (where opportunities exist). 4. The obligatory courses must each be attended one year; except Pathological Anatomy, of which two years are required, and Human Anatomy and Clinical Medicine and Surgery, each three years. 5. The following courses are non-obligatory or complementary; Medical Chemistry; Experimental Toxicology; Critical History of Medicine. 6. Besides these, other free courses may also be given. 7. There shall be three biennial examinations in the Faculty of Medicine; the first for 'promotion'; the second for 'license'; the third for the degree of 'laureate', with a diploma conferring full licence to practise. 8. In the Universities of Pisa and Siena the licentiate shall have the title of laureate of the first stage (*laurea di primo grado*). 9. In order to be admitted to the first examination (*promozione*) the candidate must have been a student at the University at least two years, and have diligently attended the Courses of Chemistry, Botany, Zoology, Comparative Anatomy and Physiology, Experimental Physics, Human Anatomy, and any subjects of instruction that he may choose, so as to make up eighteen hours of instruction per week. 10. The subjects of examination shall be Chemistry, Botany, Zoology, Comparative Anatomy and Physiology, and Experimental Physics. The Examining Board shall consist of the official teachers of the subjects of examination, with one or two additional examiners not belonging to the teaching body. On the proposal of the Faculty, and with the consent of the Minister, the examination for promotion may be divided into two parts, one to be held at the end of the first year, and the other at the end of the second year. At the beginning of each scholastic year, the Faculty shall determine what courses are to be followed and when. 11. The candidate for admission to the several examinations (license) must have passed the first examination, have attended the University during two other years, and have diligently attended courses of Human Anatomy and Physiology, General Pathology, Practical Pathological Anatomy, Materia Medica and Experimental Pharmacology, Special Medical Pathology, Special Surgical Pathology, Clinical Medicine, and Clinical Surgery. 12. The Examining Board shall be composed of the official teachers of the subjects mentioned, with one or two assessors not belonging to the teaching body. The examination shall be oral, and practical as regards Human Anatomy and Materia Medica. 13. A candidate for admission to the third examination (*laurea*) must have passed the second examination, have subsequently been a student at the University during two years, and have diligently attended the courses of Clinical Dermatology and Syphilology, Clinical Ophthalmic Surgery, Midwifery and Clinical Midwifery, Clinical Psychiatry, Exercises in Pathological Anatomy, Clinical Medicine and Surgery, Operative Surgery, Forensic Medicine and Hygiene, and voluntary courses so as to make up eighteen hours of instruction each week. 14. The candidate has to undergo an examination on the dead body

and two clinical examinations. 15. The examination on the dead body shall be conducted by a sub-committee consisting of all the professors of Operative Surgery, Pathological Anatomy, and Forensic Medicine, with one or two assessors not belonging to the official teaching body. 16. In this examination, the candidate will perform on the dead body a surgical operation, the nature of which will be decided by lot from a series prepared by the sub-committee. He will also perform a necropsy, and draw up a description of the appearances seen. Finally, he will answer the questions put to him by the examiners, and especially on the results of the necropsy, which are asked by the professor of forensic medicine. 17. The first clinical examination will be conducted in the presence of a sub-committee consisting of the professors of Clinical Dermatology and Syphilology, Clinical Obstetrics, Clinical Psychiatry, Clinical Ophthalmology, and Forensic Medicine, with one or two extra-professorial assessors. 18. In this examination the candidate will examine four cases of diseases selected from the four special classes, which have not previously been examined or treated in the clinical wards, and will give his opinion on the diagnosis, prognosis, and treatment. He will afterwards answer the questions and observations of the examiners, and especially will reply to the questions put by the professor of Forensic Medicine on the obstetric and psychological cases. 19. The several clinical examinations shall be conducted in the presence of a sub-committee, consisting of the Professors of Clinical Medicine, Clinical Surgery, Medicine, Surgery, and Forensic Medicine, with one or two extra-professorial assessors. 20. The candidate shall examine, in the presence of the subcommittee, four patients, two medical and two surgical, who have not yet been examined or treated in the wards, and shall write a description of the cases. He shall, finally, answer the questions asked by the examiners. 21. A student most have passed each stage of the third examination before he can be admitted to the next stage. 22. In each examination, a student rejected in one subject alone may present himself for examination in this subject only on a future occasion; but if he be rejected in two or more subjects, the whole examination must be repeated. 23. The three stages of the third examination having been passed, the three subcommittees unite to form a committee, presided over by the President of the Faculty, and will judge of the merits of the candidates. The successful candidates will be declared doctors in medicine and surgery, and the president will refer them to the Rector, in order that they may receive the diploma of laureate.

Foreigners desirous of obtaining medical degrees in Italian Universities must produce a diploma or degree obtained at some noted foreign university, and must at the same time produce satisfactory proof that they have actually gone through all the studies and passed the examinations required for that degree. They must also pass the ordinary examinations for the medical degree and pay the respective fees. The examinations are usually conducted in the Italian or the Latin language.

DR. VON SCHÜPPEL, professor of Pathology in the University of Tübingen, died on August 26th, at the age of 44. He was the author of some well-known contributions to medical literature on the pathology of tubercle, and of the article on 'Diseases of the Chylopoietic System' in Ziemssen's *Handbook*.

UNITED STATES OF AMERICA.

THE United States possess a very large number of institutions empowered by charter to grant the degree of doctor of medicine; there being, in some instances, special colleges and schools of medicine and surgery, and in others the medical departments of Universities. The subjoined list is taken from an interesting article on Literature and Institutions, by Dr. J. S. Billings, of the United States Army, published as a part of the *Century of American Medicine*. The dates indicate the years in which degrees in medicine were first conferred by the respective bodies.

Alabama.—Medical College of Alabama (Mobile): 1860.

California.—Medical College of the Pacific University (City) College (San Francisco); 1859.—University of California (San Francisco): 1865.

Connecticut.—Medical Department of Yale College (New Haven): 1814.

District of Columbia.—National Medical College, Medical Department of Columbian University (Washington): 1826. — Georgetown University (Washington): 1852.—Howard University (Washington): 1871.

Georgia.—Medical College of Georgia (Augusta): 1833.—Savannah Medical College: 1854.—Atlantic Medical College: 1855.

Illinois.—Rush Medical College, Medical Department of University of Chicago: 1844.—Chicago Medical College, Medical Department of North-Western University: 1860.

Indiana.—Medical College of Evansville: 1850.—Indiana Medical College (Indianopolis): 1870.—Indiana College of Physicians and Surgeons (Indianopolis): 1875.

Iowa.—College of Physicians and Surgeons (Keokuk): 1850.—Iowa State University (Iowa City): 1871.

Kentucky.—University of Louisville: 1838.—Kentucky School of Medicine (Louisville): 1851.—Louisville Medical College: 1870.—Hospital College of Medicine, Medical Department of Central University (Louisville): 1875.

Louisiana.—University of Louisiana (New Orleans): 1835.—Charity Hospital Medical College of New Orleans: 1876.

Maine.—Bowdoin College and Medical School of Maine: 1821.

Maryland.—University of Maryland (Baltimore): 1811.—Washington University School of Medicine (Baltimore): 1828.—College of Physicians and Surgeons (Baltimore): 1873.

Massachusetts. — Harvard University (Boston): 1785.

Michigan.—University of Michigan (Ann Arbor): 1851.—Detroit Medical College: 1869.

Missouri.—Missouri Medical College (St. Louis): 1841.—St. Louis Medical College: 1843.—Kansas City College of Physicians and Surgeons: 1870.

New Hampshire.—Medical School of Dartmouth College (Hanover): 1798.

New York.—College of Physicians and Surgeons of the City of New York: 1769.—Albany Medical College: 1839.—University of the City of New York: 1842.—University of Buffalo: 1847.—Long Island College Hospital (Brooklyn): 1860.—Bellevue Hospital Medical College (New York): 1862.—College of Medicine of Syracuse University: 1873.

Ohio.—Medical College of Ohio (Cincinnati): 1821.—Starling Medical College (Columbus): 1836.—Cleveland Medical College: 1844. — Cincinnati College of Medicine and Surgery: 1852.—Miami Medical College (Cincinnati): 1853.—University of Wooster (Cleveland): 1865.

Oregon.—Williamette University (Salem): 1867.

Pennsylvania.—University of Pennsylvania (Philadelphia): 1768.—Jefferson Medical College (Philadelphia): 1826.

South Carolina.—Medical School of the State of South Carolina (Charleston): 1825.—University of South Carolina (Columbia): 1868.

Tennessee.—University of Nashville: 1852.—Vanderbilt University (Nashville): 1875.

Texas. — Galveston Medical College: 1866. — Texas Medical College and Hospital (Galveston): 1874.

Vermont. — University of Vermont and State Agricultural College (Burlington): 1823.

Virginia. — University of Virginia (Charlottesville): 1828.—Medical College of Virginia (Richmond): 1839.

UNIVERSITY OF PENNSYLVANIA.

THE Medical Department of this University is the oldest medical school in America, having been established in 1765 by Drs. John Morgan and William Shippen, on the plan of the University of Edinburgh, of which the founders were graduates. The following are the professors of the faculty as at present constituted:—Dr. C. J. Stillé, Provost of the University and *ex officio* President of the Faculty; Dr. H. H. Smith, M.D. (Surgery—*Emeritus*); Dr. Joseph Leidy (Anatomy); Dr. Richard A. F. Penrose (Obstetrics and Diseases of Women and Children); Dr. Alfred Stillé (Theory and Practice of Medicine, and Clinical Medicine); Dr. D. Hayes Agnew and Dr. John Rhea Barton (Surgery and Clinical Surgery); Dr. William Pepper (Clinical Medicine); Dr. William Goodell (Clinical Gynæcology); Dr. James Tyson (General Pathology and Morbid Anatomy); Dr. Horatio C. Wood (Materia Medica, Pharmacy, and General Therapeutics); Dr. Theodore G. Wormley (Chemistry); Dr. John Ashhurst, jun. (Clinical Surgery); Dr. Harrison Allen (Physiology).

The curriculum is arranged as follows—*First Year:* Anatomy, Histology, Materia Medica and Pharmacy, General Chemistry, Physiology, General Pathology, General Clinics—Medical and Surgical. Final Examinations in General Chemistry, Materia Medica, and Pharmacy. *Second Year:* Anatomy, Topographical Anatomy, Medical Chemistry, Physiology, General Pathology and Morbid Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, General Clinics—Medical and Surgical. Final examinations in Anatomy, Medical Chemistry, and Physiology. *Third Year:* General Pathology and Morbid Anatomy, Topographical Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, Operative Surgery, Minor Surgery and Bandaging, Diseases of Women and Children; Gynæcology, Bedside Instruction in Practical Medicine (including Physical Diagnosis), Bedside Instruction in Practical Surgery, Practical Ophthalmology, Practical Otology, Practical Dermatology, Practical Electro-Therapeutics, General Clinics—Medical and Surgical. Special Clinics (Nervous Diseases, Diseases of Skin, Eye, Ear, Diseases of Women and Children). Final examinations for degree at the end of the course. General Pathology and Morbid Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, and Diseases of Women and Children. Opportunities for practical work in the physiological laboratory will be afforded to those who desire them. A separate fee is charged.

No beneficiary students are received, nor students at reduced rates, except in the case of the six successful applicants for the scholarships created by the board of trustees. These are open to competitive examination. Candidates must furnish satisfactory evidence that they are without the means to defray the expenses of a medical education. They must also write a brief autobiography, which will serve as a test of their qualifications in orthography and grammar; and pass an examination in a Latin prose translation (first three books of Cæsar), and an examination in elementary physics. This examination is held annually in September.

The faculty have established a post-graduate course, which embraces Practical Physiology, Medical Chemistry, Pathology, Clinical Medicine, Clinical Surgery, Clinical Surgery of Children, Operative Surgery and Bandaging, Practical Obstetrics, Clinical Gynæcology, Diseases of the Nervous System, including Electro-Therapeutics, Diseases of Children, Ophthalmology, Dermatology, Otology, Laryngoscopy, and Venereal Diseases. A fee ranging from fifteen to twenty-five dollars is charged for instruction in each of these special departments.

The Laboratory Building is a spacious building of four floors: the first being devoted to operative dentistry; the second and third are fitted up as chemical laboratories; while the fourth contains apartments for physiological, histological, and pathological investigation. There are also a pharmaceutical laboratory, and one of experimental therapeutics. The attendance of the students upon the laboratory courses is compulsory. Before commencing dissecting, the student is obliged to attend the osteo-syndesmological laboratory, in order to make himself familiar with the skeleton. The following are the requirements for graduation.

Students who have attended one course in a regular medical school (homœopathic and eclectic schools are not recognised) will be admitted as students of the second course in the University, after having satisfactorily passed an examination in general chemistry and materia medica and pharmacy. Students who have attended two courses in a regular medical school shall be admitted as students of the third course, after having satisfactorily passed an examination in general and medical chemistry, materia medica and pharmacy, anatomy, and physiology. Graduates of other regular medical schools in good standing will be admitted as students of the third course without an examination. Graduates of colleges of pharmacy and dental colleges in good standing are admitted to the second course without an examination. The candidate for the degree of doctor of medicine must have attained the age of twenty-one years, and be of good moral character. He must have studied medicine for three years, and have attended at least his last course of instruction in this school; have prepared a satisfactory thesis, and have passed the required examinations. Candidates who have not been successful upon a first examination will be permitted to have a second before the June commencement. The commencement for conferring the degree of doctor of medicine is held on the 15th day of March, unless that day should

fall on a Saturday or Sunday, when it is held on the preceding Friday. The degree will not be conferred upon a candidate who absents himself from the public commencement, except by special permission of the medical faculty.

The entire college expenses for the three years' course is 435 dollars, including matriculation and graduating fees.

COLLEGE OF PHYSICIANS AND SURGEONS OF NEW YORK.

This is otherwise known as the Medical Faculty of Columbia College. The instruction is given by the following professors, etc.: Dr. Alonzo Clark (Pathology and Practical Medicine); Dr. Willard Parker (Clinical Surgery); Dr. J. C. Dalton (Physiology and Hygiene; Dr. T. M. Markoe (Principles of Surgery); Dr. T. Gaillard Thomas (Gynæcology) *Emeritus*; Dr. P. F. Mundé (Clinical Diseases of Women); Dr. J. T. Metcalfe (Clinical Medicine) *Emeritus*; Dr. H. B. Sands (Practice of Surgery); Dr. J. W. McLane (Obstetrics and the Diseases of Children); Dr. T. T. Sabine (Anatomy); Dr. C. F. Chandler (Chemistry and Medical Jurisprudence); Dr. E. Curtis (Materia Medica and Therapeutics); Dr. F. Delafield (Adjunct, Pathology and Practical Medicine); Dr. J. G. Curtis (Adjunct, Physiology and Hygiene); Dr. Wm. Detmold (Military and Clinical Surgery) *Emeritus*; Dr. W. H. Draper (Clinical Medicine); Dr. Cornelius R. Agnew (Clinical, Diseases of the Eye and Ear); Dr. Abraham Jacobi (Clinical, Diseases of Children); Dr. Fessenden N. Otis (Clinical Venereal Diseases); Dr. Edward C. Seguin (Clinical Diseases of the Mind and Nervous System); Dr. G. M. Lefferts (Clinical, Laryngoscopy and Diseases of the Throat); Dr. G. H. Fox (Clinical, Diseases of the Skin); Dr. Bull (Demonstrator of Anatomy); Dr. Prudden (Director of the Pathological Laboratory).

The Collegiate Year consists of a regular Winter Session, attendance upon which is required for the graduation. The Session for 1881-2 begins October 3rd, and continues till May. Tuition is by the following methods:

1. *Didactic Lectures.*—During the Session from two to six lectures are given daily by the Faculty. Attendance is obligatory.

2. *Clinical Teaching.*—Ten clinics, covering all departments of medicine and surgery, are held weekly throughout the entire year in the College Building. In addition, the Faculty give daily clinics at the larger City Hospitals and Dispensaries (such as the Bellevue Charity, New York, and Roosevelt Hospitals, the New York Eye and Ear Infirmary, the Women's Hospital, etc.) Attendance is optional.

3. *Recitations* are held daily. Attendance is optional.

Personal Instruction.—Cases of Obstetrics are furnished without charge. Personal instruction is given in Practical Anatomy, Experimental Physiology, Operative Surgery, Minor Surgery, Physical Diagnosis, Ophthalmology, Otology, Laryngoscopy, Normal and Pathological Histology, and the Examination of the urine. Attendance is optional, except upon Practical Anatomy.

Candidates for the Degree of Doctor of Medicine must have attended two full courses of lectures on Anatomy, Physiology, Chemistry, Materia Medica and Therapeutics, Obstetrics, Surgery, Pathology, and Practical Medicine; the second course must have been given in this College. Students are permitted—and are recommended—to complete the two full courses by attendance during three or more sessions, taking only certain branches in each session. Candidates must have studied Practical Anatomy during one winter session; have been engaged during three years in the study of medicine under a regular physician or surgeon; have attained the age of 21 years; and be of good moral character. Each candidate must present a thesis on some medical subject, and pass an examination in the seven branches of medical science above mentioned.

A rejected candidate may appear a second time for examination at the end of not less than five months. If he then again fails, he must matriculate, and attend a third course of winter lectures (on payment of the matriculation fee only), at this College, before he can appear a third time for examination.

Students who have attended two courses of lectures (one being at this College) on Anatomy, Physiology, and Chemistry, may be examined on these subjects at the end of their second course; and the examination, if satisfactory, is accounted final.

Students and graduates of other schools are admitted under special regulations.

The fees are: Yearly matriculation, 5 dollars; Course of Lectures each Session, 140 dollars, or 20 dollars for each course; Practical Anatomy, 10 dollars, and graduation fee, 30 dollars.

UNIVERSITY OF THE CITY OF NEW YORK.

The Professors in the Faculty of Medicine are: Dr. Alfred C. Post (*Emeritus* Professor of Clinical Surgery, and President); Dr. Charles I. Pardee (Diseases of the Ear—Dean); Dr. John C. Draper (Chemistry); Dr. Alfred L. Loomis (Pathology and Practice of Medicine); Dr. W. Darling (Anatomy); Dr. W. H. Thomson (Materia Medica and Therapeutics); Dr. J. W. S. Arnold (Physiology and Histology); Dr. J. Williston Wright (Surgery); Dr. Fanueil D. Weisse (Practical and Surgical Anatomy); Dr. W. H. Polk (Obstetrics, and Diseases of Women and Children; Dr. L. A. Stimson (Pathological Anatomy); Dr. A. L. Ranney (Adjunct Professor of Anatomy).

A Post-Graduate Course of Lectures is delivered by the following Professors: Dr. D. B. St. John Roosa (Ophthalmology); Dr. Wm. A. Hammond (Diseases of the Mind and Nervous System); Dr. Stephen Smith (Orthopædic Surgery); Dr. J. W. S. Gouley (Diseases of the Genito-Urinary System); Dr. Montrose A. Pallen (Gynæcology); Dr. Henry G. Piffard (Dermatology); Dr. A. E. Macdonald (Medical Jurispudence); Dr. J. L. Little (Clinical Surgery); Dr. F. R. Sturgis (Venereal Diseases).

The Collegiate Year is divided into three Sessions: a Preliminary Session, a Regular Winter Session, and a Spring Session.

The Professors of the Practical Chairs are connected with the Bellevue and Charity Hospitals, and the University Students are admitted to all the Clinics given therein, free of charge.

In addition to daily Hospital Clinics, there are eight Clinics each week in the College. Five Didactic Lectures are given daily in the College building, and Evening Recitations are conducted by the Professors of Chemistry, Practice, Anatomy, Materia Medica, Physiology, Surgery, and Obstetrics, upon the subjects of their lectures.

In the Spring Session, besides the daily Clinics, Recitations, and Special Practical Courses, as in

Winter, there will be lectures on Special Subjects by the members of the Post-Graduate Faculty.

The Dissecting-room is open throughout the entire Collegiate Year: material is furnished free of charge.

Students who have studied two years and have attended two full courses of lectures, may be admitted to examination in Chemistry, Anatomy, and Physiology, and, if successful, will be examined at the expiration of their full course of study, on Practice, Materia Medica and Therapeutics, Surgery, and Obstetrics; but those who prefer it may have all their examinations at the close of their full term.

Fees.—These are: for Course of Lectures, 140 dollars; Matriculation, 5 dollars; Demonstrator's Fee (including material for dissection), 10 dollars; Graduation Fee, 30 dollars; Post-Graduate Certificate, 30 dollars.

BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

THE teaching staff of the College consists of the following professors: Dr. Isaac E. Taylor (Ostetrics and Diseases of Women)—*Emeritus;* Dr. James R. Wood (Surgery)—*Emeritus;* Dr. Fordyce, Barker (Clinical Midwifery and Diseases of Women); Dr. B. W. McCready (Materia Medica and Therapeutics and Clinical Medicine)—*Emeritus;* Dr. Austin Flint (Principles and Practice of Medicine, and Clinical Medicine); Dr. W. H. Van Buren (Principles and Practice of Surgery, Diseases of the Genito-Urinary System, and Clinical Surgery); Dr. Lewis A. Sayre (Orthopædic Surgery, and Clinical Surgery); Dr. Alexander B. Mott (Clinical and Operative Surgery); Dr. Wm. T. Lusk (Obstetrics and Diseases of Women and Children, and Clinical Midwifery); Dr. A. A. Smith (Materia Medica and Therapeutics, and Clinical Medicine); Dr. Austin Flint, jun. (Physiology and Physiological Anatomy); Dr. Joseph D. Bryant (General, Descriptive, and Surgical Anatomy); Dr. R. Ogden Doremus (Chemistry and Toxicology); Dr. Edward G. Janeway (Pathological Anatomy and Histology, Diseases of the Nervous System, and Clinical Medicine); Dr. Henry D. Noyes (Ophthalmology and Otology); Dr. John P. Gray (Psychological Medicine and Medical Jurisprudence); Dr. Erskine Mason and Dr. J. W. Howe (Clinical Surgery); Dr. Edward L. Keyes (Dermatology, and Adjunct to the Chair of Principles of Surgery); Dr. J. L. Smith (Diseases of Children); also the following lecturers: Dr. L. M. Yale (Adjunct, upon Orthopædic Surgery); Dr. Beverley Robinson (Clinical Medicine); Dr. F. H. Bosworth (Diseases of the Throat); Dr. C. A. Doremus (Practical Chemistry and Toxicology, and Animal Chemistry); Dr. F. A. Castle (Pharmacology); Dr. W. H. Welch (Pathological Histology); Dr. T. H. Burchard (Surgical Emergencies); Dr. C. S. Bull (Ophthalmology and Otology); Dr. A. R. Robinson (Normal Histology).

The Collegiate Year in this Institution embraces the Regular Winter Session, and a Spring Session. The Regular Session begins on Wednesday, September 21, 1881, and ends about the middle of March 1882. During this Session, in addition to four didactic lectures on every week day except Saturday, two or three hours are daily allotted to clinical instruction. Attendance upon two regular courses of lectures is required for graduation. The Spring Session consists chiefly of recitations from text-books. This Session begins about the middle of March, and continues until the middle of June. During this Session, daily recitations in all the departments are held by a corps of examiners appointed by the Faculty. Short courses of lectures are given on special subjects, and regular clinics are held in the Hospital and in the College building.

Fees.—1. For the first and second years, each 140 dollars; for all third year's students and all graduates of other colleges, 100 dollars; Matriculation fee, 5 dollars; Demonstrator's ticket (including material for dissection), 10 dollars; Graduation fee, 30 dollars, or 10 dollars for each of the yearly examinations. 2. For the Spring Session: Matriculation (ticket valid for the following winter), 5 dollars; Recitations, Clinics, and Lectures, 35 dollars; Dissection (ticket valid for the following winter), 10 dollars.

The Matriculation Examination consists of English composition (one foolscap page of original composition upon any subject, in the handwriting of the candidate); Grammar, an examination upon the above-mentioned composition; Arithmetic, including vulgar and decimal fractions; Algebra, including simple equations; Geometry, first two books of Euclid. This examination will be waived for those who have received the degree of A.B., those who have passed the freshman examination for entrance into any incorporated literary college, those who present certificates of proficiency in the subjects of the matriculation examination from the principal or teachers of any reputable high school, and those who have passed a matriculation examination at any recognised medical college or at any scientific school or academy in which an examination is required for admission.

HARVARD UNIVERSITY, BOSTON.

ALL candidates for admission who hold no degree in arts or science, must pass a written examination on entrance to this School, in English, Latin, Physics, and in any one of the following subjects: French, German, Elements of Algebra or of Plain Geometry, Botany.

Instruction is given by lectures, recitations, clinical teaching, and practical exercises, distributed throughout the academic year. The year, which begins on September 29 and ends on the last Wednesday in June 1882, is divided into two equal terms.

The course of study recommended by the Faculty covers four years, but until further notice the degree of Doctor of Medicine will continue to be given upon the completion of three years of study, to be as ample and full as heretofore. The degree of Doctor of Medicine *cum laude* will be given to candidates who have pursued a complete four years' course, and obtained an average of 75 per cent. upon all the examinations of this course. In addition to the ordinary degree of Doctor of Medicine as heretofore obtained, a certificate of attendance on the studies of the fourth year will be given to such students desiring it as shall have attended the course, and have passed a satisfactory examination in the studies of the same.

The order of studies and examinations for the four years' course is as follows: *First Year.*—Anatomy, Physiology, and General Chemistry. *Second Year.*—Practical and Topographical Anatomy, Medical Chemistry, Materia Medica, Pathological Anatomy, Clinical Medicine, Surgery, and Clinical Surgery. *Third Year.*—Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery,

and Clinical Surgery. *Fourth Year.*—Ophthalmology, Otology, Dermatology, Syphilis, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Obstetrics, Clinical and Operative Obstetrics, Clinical Medicine, Clinical and Operative Surgery, Hygiene, Forensic Medicine. Students are divided into four classes, according to their time of study and proficiency, and during their last year will receive largely increased opportunities of instruction in the special branches mentioned. Students who began their professional studies elsewhere may be admitted to advanced standing; but all persons who apply for admission to the advanced classes must pass an examination in the branches already pursued by the class to which they seek admission. The examinations are held in the following order: End of first year—Anatomy, Physiology, and General Chemistry. End of second year—Topographical Anatomy, Medical Chemistry, Materia Medica, and Pathological Anatomy. End of third year—Therapeutics, Obstetrics, Theory and Practice of Medicine, Surgery. End of fourth year—Ophthalmology, Otology, Dermatology, Syphilis, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Obstetrics, Clinical and Operative Obstetrics, Clinical Medicine, Clinical and Operative Surgery, Hygiene, Forensic Medicine.

The order for the three years' course is as follows: *First Year.*—Anatomy, Physiology, and General Chemistry. *Second Year.*—Practical and Topographical Anatomy, Medical Chemistry, Materia Medica, Pathological Anatomy, Clinical Medicine, and Clinical Surgery. *Third Year.*—Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Ophthalmology, Dermatology, Syphilis, Otology, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Hygiene, Forensic Medicine. Students following this course are classified as heretofore, and the instruction in the special branches is of the same character as that which has been given for several years. The examinations of the first two years are common to both groups of students. The final examinations at the close of the third year are in the following subjects: Therapeutics, Obstetrics, Surgery and Clinical Surgery, Theory and Practice, Clinical Medicine.

Examinations in all subjects are also held before the opening of the School, beginning September 27.

Every candidate for a degree must be twenty-one years of age; must have studied medicine three or four full years, have spent at least one continuous year at this School, have passed a written examination upon all the prescribed studies of the course taken, and have presented a thesis.

Course for Graduates.—For the purpose of affording to those already Graduates of Medicine additional facilities for pursuing clinical, laboratory, and other studies, in such subjects as may specially interest them, the Faculty has established a course which comprises, in addition to the list of special departments above stated, the following branches: Histology; Physiology; Medical Chemistry; Pathological Anatomy. On payment of the full fee the privilege of attending any of the other exercises of the Medical School, the use of the laboratories and library, and all other rights accorded by the University will be granted. Single branches may also be pursued. Graduates of other Medical Schools who may desire to obtain the degree of M.D. at this University will be admitted to examination for this degree after a year's study in the Graduates' Course. Examination on entrance is not required.

Fees.—The fees are: for Matriculation, 5 dollars; for the year, 200 dollars; for one term alone, 120 dollars; for Graduation, 30 dollars. For Graduates' course the fee for one year is 200 dollars; for one term, 120 dollars; and, for single courses, special fees. Payment is made in advance.

Members of any one department of Harvard University have a right to attend lectures and recitations in any other department without paying additional fees.

JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

The lectures during the coming winter session will be delivered by the following professors: Dr. Samuel D. Gross (Institutes and Practice of Surgery); Dr. Ellerslie Wallace (Obstetrics and Diseases of Women and Children); Dr. Roberts Bartholow (Materia Medica and General Therapeutics; Dr. Henry C. Chapman (Institutes of Medicine and Medical Jurisprudence); Dr. J. M. Da Costa (Practice of Medicine); Dr. W. H. Pancoast (General, Descriptive, and Surgical Anatomy); Dr. Robert E. Rogers (Medical Chemistry and Toxicology); Dr. Joseph Pancoast is *Emeritus* professor of Anatomy.

A summer course of Supplementary Lectures is given, extending through April, May, and June. There is no additional charge for this course to matriculates of the College, except a registration fee of 5 dollars; non-matriculates may pay 35 dollars, which is, however, credited on the amount of fees paid for the ensuing Winter Course.

Clinical Instruction is given throughout the year at the Hospital of Jefferson College, which accommodates 100 patients. The staff is constituted as follows—*Physicians:* Dr. J. Solis-Cohen, Dr. J. C. Wilson, Dr. O. P. Rex, Dr. W. W. Vanzalvah; *Surgeons:* Dr. J. H. Brinton, Dr. S. W. Gross, Dr. R. J. Levis; *Ophthalmic Surgeon:* Dr. W. Thompson; *Aural Surgeon:* Dr. L. Turnbull; *Gynæcologists:* Dr. F. H. Getchell, Dr. J. E. Mears; *Pathologist:* Dr. M. Longstreth.

A candidate for the degree of M.D. must be of good moral character and at least 21 years of age. He must have studied medicine for not less than three years, and have attended at least two full winter sessions of lectures, one of which must have been in this College. At least one course of Practical Anatomy and one of Clinical Instruction must have been attended; and he must present a thesis, of his own composition and in his own handwriting, on some medical subject.

No honorary degrees in medicine are granted by this College.

The *Fees* are: for a full Course, 140 dollars; Matriculation Fee (paid once only), 5 dollars; Practical Anatomy, 10 dollars; Graduation Fee, 30 dollars.

JOHNS HOPKINS UNIVERSITY, BALTIMORE.

The Johns Hopkins University provides a special collegiate course for those who intend afterwards to study medicine. This course extends throughout three years, and the A.B. degree is conferred on matriculated students who complete it. The main object held in view is to utilise for intending medical students the opportunities for practical study in physics, chemistry, and biology, found in an en-

dowed institution with well-equipped laboratories, and often wanting in medical schools; it is also considered an object to lessen the work at a medical school by giving the student a good knowledge of the sciences which lie at the basis of the medical art before he commences professional study. Physics, chemistry, and biology are therefore the main subjects included in the course; some knowledge of French and German is also demanded; aud there are, in addition, several subjects between which an option is allowed. These are Latin, Greek, mathematics, English literature, history, logic, and psychology. Each student must take up at least two of these optional subjects, the amount of knowledge required in each being such as would be obtained by a year's honest work.

The scientific subjects are taken up in the following order.

I. *Physics*—There will be three recitations, two lectures, and one exercise in the physical laboratory weekly through a year. Elementary mechanics will be studied during the first portion of the year; then will follow the study of the physical properties of matter, theory of undulations, acoustics, heat, magnetism, electricity, and light.

II. *Chemistry*—The course of lectures and recitations on general chemistry is in progress through the year. Students of this course are expected to attend all these exercises during the first year, and during the last half of the first year and the first half of the second year to work daily in the chemical laboratory. The instruction in the laboratory will be directed in such a way as seems best adapted to give the student a thorough knowledge of the pure science of chemistry and the methods peculiar to it.

III. *Biology*—The study of biology will begin in the second year, after the student has made considerable progress in the study of physics and chemistry, and will continue through the third year. Those who have acquired elsewhere sufficient knowledge of the above subjects to satisfy the examiners may be at once admitted to work in the biological laboratory.

The course is designed to give the student, in the place, a knowledge of the laws of life in general, whether exhibited in animals or plants; and, secondly, a knowledge of human anatomy and physiology. Human physiology is taught as a part of general physiological science, the student being left to acquire afterwards its clinical and hygienic applications as part of his medical studies proper; and similarly surgical and regional anatomy are left for the medical school proper; the student in this course studies the human body as the final one in a series of animal types. It is believed that by approaching these sciences from a general scientific stand-point, the student is best prepared for the study of pathological structure and function; and that a great advantage will result from his being able to concentrate his attention on the professional applications of these students when he enters a medical school. The course of study is as follows. 1. *General Biology*—Lectures, recitations, or examinations four times weekly throughout one year, with daily laboratory instruction. In this course, beginners are taught how to use the microscope and to dissect. 2. *Human and Comparative Osteology*—About sixty lectures or recitations. 3. *Human Anatomy*.—This course extends from the commencement of the closing academic year to the end of March, and consists chiefly of demonstrations and practical study in the dissecting-room. 4. *Animal Physiology and Histology*.—Three lectures or examinations weekly throughout the academic year. The microscopic structure of the tissues and organs is studied, except so much as may have already been gone through in the course of general biology. Students are required to perform for themselves the simpler physiological experiments. 5. From time to time short advanced courses of lectures on special physiological topics are delivered.

Instruction is also provided in mathematics, ancient and modern languages, history, psychology, English philology and literature, comparative anatomy, botany.

Graduates from approved institutions, having already obtained a liberal education, concentrate their attention on the scientific courses, and so complete the curriculum preliminary to medical studies in less than three years. On the other hand, a student may spend a longer time in these preparatory studies, or take up additional ones. Medical men or others properly fitted to profit by such opportunities are received for advanced study or investigation in chemistry, histology, or physiology, as well as other subjects. Twenty fellowships, each bringing in five hundred dollars per annum, are annually awarded to advanced students, at least three being in chemistry and an equal number in biology.

CANADA.

THE following are the Medical Examining Bodies and Schools in the several provinces constituting the Dominion of Canada.

NOVA SCOTIA.—University of Halifax Faculty of Medicine; Halifax Medical College.

ONTARIO.—College of Physicians and Surgeons of Ontario; Medical Faculty of the University of Victoria College, Coburg; Medical Faculty of Queen's College, Kingston; Royal College of Physicians and Surgeons, Kingston; Medical Faculty of the University of Ottawa; Toronto University Faculty of Medicine; Trinity College Faculty of Medicine, Toronto; Toronto School of Medicine; Trinity Medical School.

QUEBEC.—College of Physicians and Surgeons of Quebec; Bishop's College University Faculty of Medicine, Montreal; Laval University, Montreal and Quebec: McGill University Faculty of Medicine.

TRINITY COLLEGE UNIVERSITY FACULTY OF MEDICINE.

THE following are the requisites for admission to the Degree of Bachelor of Medicine in this University. The candidate must have passed a Matriculation Examination in the following subjects, or one equivalent thereto, in this or in some other recognised institution. The subjects comprised are: English Language (including Grammar and Composition); Arithmetic; Algebra (including Simple Equations); Geometry (first two Books of Euclid); Latin (Translation and Grammar); and one of the following optional subjects: Greek, French, German, Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics. A Graduate or Matriculant in Arts, in any recognised University in Her Majesty's Dominions, is not required to pass the Matriculation Examination. He must produce a satisfactory certificate of good conduct, must be 21 years of age, and

must have pursued Medical studies for at least four years, and have regularly attended lectures extending over at least three sessions* of six months each; viz., two courses of six months each on Anatomy, Practical Anatomy, Theory and Practice of Medicine, Principles and Practice of Surgery, General Chemistry, Midwifery, and Diseases of Women and Children, Materia Medica, and Therapeutics, Physiology and Institutes of Medicine; and one course on each, Medical Jurisprudence, Toxicology, Practical Chemistry, Botany, and Sanitary Science. He must also have attended for at least eighteen months the practice of some General Hospital, and have attended, during two sessions, Clinical Lectures on Medicine and Surgery; and, for at least six months, the practice of a Lying-in-Hospital; or he must have otherwise enjoyed equivalent obstetrical advantages, with attendance upon at least six cases of Labour. He must have passed in this University an examination in all the above subjects. This course of study may have been pursued either wholly in Trinity Medical School, or partly in some other recognised Medical School. The last requirement does not apply to medical men coming up for an examination who have been several years in practice.

The examinations are Primary and Final. The Primary Examination embraces Descriptive Anatomy, Physiology and Microscopical Anatomy, General Chemistry and Chemical Physics, Practical Chemistry, Materia Medica and Therapeutics, Botany. It may be passed at the close of the second year's lectures.

The Final Examination embraces Medical and Surgical Anatomy, Theory and Practice of Medicine, including Medical Pathology, Principles and Practice of Surgery, Midwifery and Diseases of Women and Children, Medical Jurisprudence and Toxicology, and Sanitary Science. It takes place at the close of the last Winter Session.

Should the candidate desire it, he may undergo his entire examination in all the branches at the end of his last year's study. The examinations are held annually in the spring.

Degree of M.D.—Candidates for this Degree must be Bachelors of Medicine of at least six months' standing. They are required to send in, at least one month before Convocation, a Thesis on some Medical Subject, which Thesis must be approved by the Board of Examiners.

Fees.—These are: Primary Examination for the Degree of M.B., 10 dollars; Final ditto, 14 dollars. Full Fee, including all College Examinations, 24 dollars. There is no additional fee for the degree of M.D.

* Students beginning their studies after June 1881, will be required to attend Four Sessions, unless in the case of Graduates in Arts.

HALIFAX UNIVERSITY AND MEDICAL COLLEGE.

CANDIDATES for the degree of Doctor of Medicine must have attended lectures for at least four years after passing the Matriculation Examination. This examination comprises the following subjects: 1. *Compulsory:* English Language (including Grammar, Composition, and Writing from Dictation); Arithmetic (including Vulgar and Decimal Fractions and the Extraction of the Square Root); Algebra (to the end of Simple Equations); Geometry (first two books of Euclid); Latin (one book, Translation and Grammar). 2. *Optional:* One of the following subjects: History of England, with questions in Modern Geography; French Translation; German Translation; One Greek Book; Natural Philosophy (including Mechanics, Hydrostatics, and Pneumatics); History of Nova Scotia; History of the Dominion of Canada. The fee is five dollars, and is not returned in case of failure. Candidates for this examination must be at least 16 years of age. Graduates in Arts of recognised Universities are not required to pass the Matriculation Examination.

Instruction in medicine in the surgery of a recognised practitioner for one year is received as equivalent to a year of study.

The professional examination is divided into primary and final. The former comprises Anatomy, Chemistry, Materia Medica, Physiology and Botany or Zoology; the latter, Medicine, Surgery, Obstetrics, and Medical Jurisprudence. Candidates may present themselves for the primary examination at the end of the third session, or third year of study.

Candidates for the final examination must produce certificates of having attended two six months' courses each of Anatomy, Chemistry, Materia Medica, Physiology, Surgery, Midwifery, Medicine, Practical Anatomy, Clinical Medicine, and Clinical Surgery; one three months' course each of Practical Pharmacy, Medical Jurisprudence, Botany, and Practical Chemistry; the practice of a recognised Hospital during twelve months; the practice of a Lying-in Hospital for at least six months (or of having attended at least six cases of labour); of having had three months' practice in Dispensing; and of having acquired proficiency in the practice of Vaccination. One session at least must be attended in the Halifax Medical College. Each candidate must present a thesis on some medical or surgical subject, and sign a declaration that he is twenty-one years of age. The examination is oral and written, in all branches; and there is a Clinical Examination in Medicine and Surgery at the bedside.

The fee for the degree of Doctor of Medicine and Master of Surgery is twenty dollars, with a registration fee of one dollar.

McGILL UNIVERSITY FACULTY OF MEDICINE.

THE Matriculation Examination comprises the following subjects: English Language (including Grammar and Composition); Arithmetic (including Vulgar and Decimal Fractions); Algebra (including Simple Equations); Geometry (first two books of Euclid); Latin (Translation and Grammar); and one of the following optional subjects: Greek, French, German, Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics. Graduates in Arts of recognised Universities are not required to submit to the Matriculation Examination; and a certificate of having passed this examination before the College of Physicians and Surgeons of Ontario or of Quebec is accepted.

No one can be admitted to the degree of Doctor of Medicine and Master of Surgery who shall not, in this or in some other University, College, or Medical School, approved of by this University, either have attended lectures for at least four six-months' sessions, or studied Medicine during at least four years, and during that time have attended lectures for at least three six-months' sessions.

Candidates for the Final Examination must furnish testimonials of attendance on the following courses: Anatomy, Chemistry, Materia Medica and Pharmacy, Institutes of Medicine, Principles and Practice of Surgery, Midwifery and Diseases of Women and

Children, Theory and Practice of Medicine, Practical Anatomy, Clinical Medicine, Clinical Surgery—each two six-months' courses; Medical Jurisprudence—one course of six months or two courses of three months; Practical Chemistry, Botany or Zoology, Hygiene—each one three-months' course duration; not less than twenty-five Demonstrations upon Microscopic Anatomy, Physiology, and Pathology. Testimonials equivalent to, though not precisely the same as those above stated, may be presented and accepted. The candidate must have attended during eighteen months the practice of the Montreal General Hospital, or that of some other approved Hospital, and have compounded medicines for six months. He must also have attended for at least six months the practice of the University or other approved Lying-in Hospital, and have attended at least six Accouchements.

Every candidate for examination must have attended at least one session at this University, and one full course of all the branches included in its curriculum.

The examinations at the close of each session are arranged as follows: *First Year.*—Elementary Anatomy and Physiology; Chemistry (Chemical Physics and Chemical Philosophy); Materia Medica; Practical Anatomy; Botany. *Second Year.*—Primary Pass Examination—Anatomy; Practical Anatomy; Physiology; Chemistry; Practical Chemistry; Materia Medica. *Third Year.*—Sessional Examination—Medical Jurisprudence, with Toxicology; Hygiene;* Medicine; Surgery; Midwifery. *Fourth Year.*—Final Pass Examination—Medicine, Surgery, Midwifery, Clinical Medicine, Clinical Surgery, Medical Anatomy, Surgical Anatomy.

The Sessional Examinations at the close of the first and third years are compulsory. At the Primary Examination at the end of the second year, the student may leave two branches for the third year; in any case, Chemistry and one other must be taken at the end of the second year.

Fees.—These are: Matriculation, 5 dollars; Registration each session, 4 dollars; Degree, 20 dollars; Registration of Degree, 1 dollar.

BISHOP'S COLLEGE UNIVERSITY FACULTY OF MEDICINE, MONTREAL.

THIS University confers the degrees of Doctor of Medicine and Master of Surgery. The degree of Master of Surgery (C.M.) is not conferred on any person who does not at the same time obtain the degree of Doctor of Medicine (M.D.) Each student must undergo, prior to the commencement of his medical studies, a Preliminary Examination upon the following subjects: English, French, Latin, Arithmetic, Algebra, Geometry, History, Belles-Lettres, and one of the following optional subjects: Greek, Natural and Moral Philosophy. Candidates for degrees must have been engaged uninterruptedly for four years in medical and surgical study; but a certificate of having studied one full year with a duly licensed practitioner reduces the period of study at the University to three sessions. Students must matriculate afresh at the commencement of every session, on or before the 1st of December. Every candidate for graduation must give sufficient evidence by certificates: 1. That he has attended two six months' courses of lectures on each of the following subjects: (*a*) General or Descriptive Anatomy, Principles and Practice of Surgery, Theory and Practice of Medicine, Midwifery and Diseases of Women and Children, Chemistry, Materia Medica and Therapeutics, and Physiology; (*b*) One six months' course or two three months' courses of Medical Jurisprudence, one six months' course of Pathology, one three months' course of Botany, of Hygiene, and also of Practical Chemistry and Microscopy, and also a course of not less than twenty-five demonstrations upon Microscopic Anatomy, Physiology and Pathology; (*c*) Not less than two six months' courses of Clinical Medicine and Clinical Surgery; (*d*) Two six months' courses of Practical Anatomy; (*e*) That he has attended for at least eighteen months, or three periods of six months each, the medical and surgical practice of a Hospital, in which are contained not less than fifty beds, under the charge of not less than two physicians or surgeons, and that he has been engaged for at least six months in compounding and dispensing medicines. That he has attended at least six cases of Midwifery.

Of the four years of medical and surgical study, one full course on each branch mentioned in sections *a* and *b* must be attended in this University.

Every candidate for the degree must, on or before the 1st day of March, deliver to the Dean of the Medical Faculty, a declaration, in his own handwriting, that he has completed his twenty-first year of age (or that he will have done so before the day of graduation); and a statement of his studies, accompanied with proper certificates.

Every candidate is examined both in writing and *vivâ voce*. The Examinations are divided into Primary and Final. The Primary examination comprehends Anatomy, Chemistry, Practical Chemistry, Materia Medica, Physiology, and Botany or Zoology. The Final Examination includes Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Midwifery and the Diseases of Women and Children, Medical Jurisprudence, Pathology, and Hygiene.

Candidates may be admitted to examination on the Primary branches at the end of the third year of their study. The Final Examination does not take place until the candidate has completed his fourth year.

COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

ALL persons, whatever qualifications they may possess, must be examined by this College in order to obtain a licence to practise in the province of Ontario.

Candidates for the membership of this College must spend four years (forty-eight months) in professional studies after having passed a matriculation examination in the English Language, Arithmetic, Algebra (including Simple Equations), Geometry (first two books of Euclid), Latin (Translation and Grammar), and either Greek, French, German, or Natural Philosophy (including Mechanics, Hydrostatics, and Pneumatics). Graduates in Arts, or students who have matriculated in Arts in any University in the British dominions, are not required to pass the Matriculation Examination; and Graduates in Arts may pass the final examination at the end of three years.

Every candidate must have attended, in an University, college, or school of medicine, two courses of six months each, in Anatomy, Practical Anatomy, Physiology (including Histology), Theoretical Che-

* May be taken at the end of the second year.

mistry, Materia Medica and Therapeutics, Medicine, Surgery, Midwifery and Diseases of Women and Children, Clinical Medicine and Clinical Surgery; one course of six months, or two courses of three months each, on Medical Jurisprudence; one course of three months in Practical Chemistry and on Botany; one course of not less than twenty-five demonstrations on Histology, Physiology, and Pathology; and one course of twenty-five lectures on Sanitary Science.

The Professional Examination is divided into primary and final. The Primary Examination, at the end of the second winter session, comprises Descriptive Anatomy, Physiology and Histology, Theoretical and Practical Chemistry, Toxicology, Sanitary Science, and Botany. (Graduates in Arts who have attended one course of lectures on Botany, and two on Theoretical Chemistry, and have passed an examination in these subjects, are not subjected to further examination thereon.) The Final Examination comprises Medical and Surgical Anatomy, Theory and Practice of Medicine and Medical Pathology, Surgery and Operative Surgery, Midwifery and Diseases of Women and Children, Operative Midwifery, Medical Jurisprudence, and Materia Medica and Therapeutics.

Before being admitted to the Final Examination, the candidate must have spent six months in the office of a regularly qualified medical practitioner, in dispensing medicine; have attended the practice of a general hospital for twenty-five months; have attended six courses of midwifery; and have attained the age of twenty-one years.

The Primary Examination is entirely oral; the Final is entirely written. Any candidate who fails in any one branch at the Primary Examination is held to have failed in all. Any candidate who passes in four or more branches at the Final Examination, but fails in the others, is required to pass in the latter only at a subsequent examination. Persons intending to practise Homœopathy are, on application, examined by Homœopathic Examiners.

Persons from recognised colleges outside the provinces of Ontario and Quebec must pass the matriculation examination, and afterwards attend one full winter course of lectures during two winter sessions in some one of the Ontario Medical Schools, and such other course or courses as may be necessary to complete the required curriculum; and must pass all the examinations.

The *Fees* are: Matriculation Examination, 10 dollars; Registration, for students not examined by the College Examiners, 10 dollars; Primary Examination, 20 dollars; Final Examination, including Registration, 30 dollars; Diploma of Membership, 10 dollars; annual contribution from members of the college, 1 dollar. No portion of the examination fees is returned to unsuccessful candidates.

COLLEGE OF PHYSICIANS AND SURGEONS OF QUEBEC.

EVERY medical student of the province of Quebec before beginning his professional studies, must pass a satisfactory examination upon the following subjects: English and French, Latin, Geography, History, Arithmetic, Algebra, Geometry, and Belles-Lettres, and upon any one of the following subjects: Greek, Natural and Moral Philosophy. He must also present a certificate of a good moral character.

The examination is oral and written; and the oral part of the examination is conducted jointly by two examiners, one speaking French and the other English.

The Board may recognise an equivalent preliminary examination before any authorised College or Licensing Board in Her Majesty's Dominion, provided that the same privilege is accorded to the students of this province.

Every medical student must pursue his professional studies during not less than four years from the time of his having passed the Preliminary Examination. Of the four years, three six months' sessions at least must be passed in attendance upon lectures at an University, College, or incorporated School of Medicine recognised by this Board, the first whereof shall be so passed the year immediately succeeding the Preliminary Examination. Every student must pursue the following curriculum of study: General or Descriptive Anatomy, Practical Anatomy, Surgery, Practice of Medicine, Midwifery, Chemistry, Materia Medica and General Therapeutics, the Institutes of Medicine or Physiology, and General Pathology, Clinical Medicine, Clinical Surgery, two six months' courses of each; Medical Jurisprudence, a course of six months, or two courses of three months; Botany and Hygiene, a three months' course of each; and a course of not less than twenty-five demonstrations upon Microscopic Anatomy, Physiology, and Pathology. He must attend the general practice of an Hospital containing not less than fifty beds, under the charge of not less than two physicians or surgeons, for not less than eighteen months, or for three periods of not less than six months each. He must attend six cases of labour, and compound medicine for six months. Each six months' course must consist of 120 lectures except those of Clinical Medicine, of Clinical Surgery, and of Medical Jurisprudence.

The total duration of the examination is one hour and forty-five minutes.

Before examination the candidate must deposit the required fee, and produce satisfactory evidence that he has attained the full age of twenty-one years, and that he has complied with the rules and regulations of the Board.

Fees.—These are: Preliminary or Matriculation Examination, 10 dollars; Diploma or Licence to Practice, 20 dollars; annual subscription, 2 dollars; registration of additional degrees or titles, 1 dollar. If a Candidate for the Licence or for the Preliminary Examination be rejected, he forfeits half the fees.

TORONTO UNIVERSITY FACULTY OF MEDICINE.

THE Degree of Bachelor of Medicine may be obtained, either (1) by taking a Pass Course, or (2) by taking an Honour Course.

Candidates, to enter this faculty, must pass the Matriculation Examination unless (1) they possess a Degree in Arts, not being an Honorary Degree, from any Dominion or British University, or (2) they have already matriculated in the Faculty of Arts, or in the Faculty of Law in this University. Before presenting themselves for the Matriculation Examination, candidates must produce satisfactory certificates of good conduct, and of having completed the sixteenth year of their age. The Matriculation Examination (both Pass and Honours) commences in the latter part of June, and Supplemental Examinations (Pass alone) are held in the latter part of September. Candidates on giving notice of intention to present themselves at the Matriculation

Examination must signify whether they purpose taking the Pass or the Honour Examination. Scholarships are only awarded in connection with the latter. The following groups of subjects must be passed by every Matriculant: 1. Three out of four languages, Latin, Greek, French, and German, one of which must be Latin; 2. Mathematics, including Arithmetic, Algebra to the end of Quadratics, and the first three books of Euclid; 3. English Grammar and Composition, with the Outlines of History and of Modern Geography, and an exercise in Writing to Dictation. Extra Honour papers are set in all the above-mentioned subjects, and special attention is paid to translation from English into the languages. A paper on Chemistry is set for such honour students as may enter for the same. Those candidates are placed in the first class of honours who obtain two-thirds or more of the aggregate number of marks; those who obtain one-half of the aggregate number in the second class. Two Matriculation Scholarships are awarded to the two highest candidates, provided that they have obtained at least sixty per cent. of the aggregate number of marks, exclusive of those allotted to Chemistry. Undergraduates must attend lectures and receive practical instruction, during four years, at a recognised School of Medicine. Each Undergraduate, at the end of each of the four years, must present himself at the Annual Examination. These examinations are styled the first, second, third, and fourth Professional Examinations, and are to be passed by all candidates for the Degree. If a candidate be prevented by sickness, or other unavoidable cause, from attending at one of the Professional Examinations, he may take that examination together with the next following. If a candidate be rejected in one subject only, having shown fair proficiency in the others, he may take that subject along with the work of the next Professional Examination. If a candidate for the First Professional Examination fail to pass in two subjects, the Board of Examiners may recommend that the subjects passed be allowed, and that he shall take the others with the Second Professional Examination. Graduates in Arts of this University, with honours in the department of Natural Sciences, are exempted from the First Professional Examination, and from the fee for the same. They must, however, take Anatomy along with the Second Professional Examination. No candidate can pass a Professional Examination who has not obtained at least one-half of the marks required; nor is a candidate considered as having passed any subject who has not obtained at least one-third of the marks allotted to it. Every undergraduate who proposes to present himself at a Professional Examination must send in to the Registrar a statement (according to a printed form furnished) of the course he is taking, whether Pass or Honour, of the lectures attended, and of the practical instruction received, with the names of the Teachers, and such other particulars as the printed form may indicate, together with the original certificates referred to in the statement.

The following are the certificates required for the different examinations, and the subjects of examination.

First Professional Examination.—Certificates are required: 1. Of Matriculation; 2. Of having attended a course of lectures on each of the following subjects: Anatomy, at least 100 lectures; Inorganic Chemistry, at least 60 lectures; Natural Philosophy, at least 20 lectures; *Botany, at least 40 lectures; *Zoology, at least 40 lectures. Of the above lectures marked*, at least one-third must be of the nature of practical lessons, involving laboratory practice. 3. Of practical instruction in Anatomy during six months. The subjects of examination are: 1. Anatomy of the Bones, Muscles, and Ligaments, and of the Viscera of the Abdomen and Thorax; 2. Elements of Inorganic Chemistry; 3. Elements of Natural Philosophy, Electricity, Heat, and Light; 4. Elements of Botany, including the characters and properties of the following Natural Orders: Ranunculaceæ, Papaveraceæ, Cruciferæ, Caryophyllaceæ, Malvacæ, Leguminosæ, Rosaceæ, Saxifragaceæ, Onagraceæ, Umbelliferæ, Rubiaceæ, Compositæ, Ericaceæ, Primulaceæ, Scrophulariaceæ, Labiatæ, Solanaceæ, Polyglonaceæ, Euphorbiaceæ, Urticaceæ, Amentaceæ, Orchidaceæ, Liliaceæ, Palmæ, Cyperaceæ, Gramineæ. An acquaintance with the noxious and medicinal plants of the Canadian Flora is expected; 5. Elements of Zoology; and, for candidates for honours, Comparative Anatomy of Vertebrata, and Practical Examination in Natural Philosophy.

Second Professional Examination. — Candidates must produce certificates: 1. Of having attended lectures on Anatomy (second course of 100 lectures); Physiology, Materia Medica and Therapeutics, each at least 100 lectures; Organic Chemistry, at least 40 lectures; 2. Of Practical Instruction in Anatomy (a second course of six months); Histology and Physiological Chemistry, each during at least three months; 3. Of having dissected the human body once; 4. Of being skilled in Compounding and Dispensing Drugs. (This certificate may be from a registered practitioner, the apothecary of a public hospital, or of a public dispensary, or from a member of the Pharmaceutical Societies of Ontario or Quebec.) The subjects of examination are: 1. Elements of Organic Chemistry; 2. Anatomy; 3. Physiology; 4. Materia Medica and Therapeutics; and (for honours) Physiology of Muscle, Nerve, Circulation, etc.

Third Professional Examination.—The candidates must produce evidence: 1. Of having attended lectures on Practice of Medicine, Surgery, Obstetrics, etc.; Clinical Surgery and Medicine, during courses of 100 lectures each; General Pathology, at least 50 lectures; 2. Of having dissected the human body a second time; 3. Of Practical Instruction in Pathological Histology during at least three months. The subjects of this examination are: 1. Practice of Medicine; 2. Surgery and Surgical Anatomy; 3. General Pathology, including Morbid Anatomy and the mode of conducting Necropsies; 4. Obstetrics and Diseases of Women and Children; 5. Clinical Medicine and Surgery.

Fourth Professional Examination. — Certificates are required: 1. Of having attended lectures on:— Clinical Medicine and Surgery, a further course of 100 lectures; Forensic Medicine, 50 lectures; Hygiene, 25 lectures; Medical Psychology, 12 lectures; 2. Of Practical Instruction in Chemistry in its application to Hygiene and Forensic Medicine; 3. Of having attended at least six clinics in a Public Lunatic Asylum; 4. Of having conducted at least six Labours; 5. Of proficiency in Vaccination (certificate received from any registered Practitioner); 6. Of attendance in the wards of a Public Hospital accommodating not less than 100 beds during eighteen months; 7. Of attendance for six months on the out practice of a Hospital, Dispensary, or registered Practitioner; 8. Of having attended twelve necropsies. The subjects of examination are: 1. Practice

of Medicine; 2. Surgery; 3. Forensic Medicine; 4. Hygiene; 5. Medical Psychology; 6. Clinical Medicine and Surgery; 7. Practical Chemistry in its application to Forensic Medicine and Hygiene.

In all the Professional Examinations special importance is attached to the practical part.

Candidates for Honours are entitled to First Class Honours in any of the Professional Examinations if they obtain 75 per cent. of the aggregate marks; those who obtain 66 per cent. will be entitled to Second Class Honours. Extra papers on all the Pass Subjects will be set for Honour candidates, as well as papers on certain subjects, as indicated above. Candidates proceeding to the Degree of M.B. by taking the Honour Course are grouped in two classes. Those receive the Degree with First Class Honours who have been placed in the Honour List in all of the four Professional Examinations, and have obtained First Class Honours in at least three out of the four. Those receive their Degree with Second Class Honours who have been placed in the Honour List in three out of the four Professional Examinations, and have obtained First Class Honours in at least one examination. Candidates for the Degree of M.B. who are also Graduates in Arts of the University with Honours in the Department of Natural Science, are considered as having passed their first Professional Examination with First Class Honours.

Degree of M.D.—Candidates for the Degree of M.D. must be of one year's standing from admission to the Degree of M.B., and have composed an approved thesis upon some medical subject.

Fees.—The fees are: Matriculation, 5 dollars; Registration of exemption from this examination for Graduates in Arts from other Universities, 5 dollars; for Matriculants from other Faculties in the University, 3 dollars; for Graduates in Arts of this University, 2 dollars. No fee is exacted from Graduates in Arts of this University who have taken honours in Natural Science. For each Professional Examination, 2 dollars; a rejected candidate may present himself at the same examination in the following year on payment of 1 dollar. Degree of M.B., 6 dollars; Degree of M.D., 8 dollars; admission *ad eundem gradum*, 10 dollars.

TEXT-BOOKS.

THE object of the subjoined notes is to inform the student in general terms of the works which he may use as text-books. The list is not intended to be exclusive; nor is it our purpose to say always which book is the best in any subject. Some students learn best from one book; others from another. Again, some books are more adapted than others to the teaching of the school to which the pupil belongs. In addition to the ordinary text-books, reference will be made to some which, though not absolutely necessary to the student, may be studied with advantage.

ANATOMY AND PHYSIOLOGY.

The anatomy of the bones is described in the chief text-books, such as those of Quain and Wilson; but there are also some special works on the subject. A sixth edition of Mr. Luther Holden's *Human Osteology* (Churchill) is announced as being in the press. The same firm publishes a *Student's Guide to Osteology*, by Mr. Wagstaffe. There is also Mr. Norton's *Osteology for Students* (Baillière, Tindal, and Cox). The anatomy of the joints is specially and ably treated in Mr. Henry Morris's *Anatomy of the Joints of Man* (J. and A. Churchill). For the early study of anatomy, Mr. St. George Mivart's *Elementary Lessons in Anatomy* (Macmillan and Co.) will be found instructive. The interest of the subject is increased by a demonstration of the chief relations of the structure of man to that of other animals. Among the indispensable text-books treating of human anatomy as a whole must be mentioned Quain's *Elements of Anatomy* (Longmans and Co.), edited by Drs. Sharpey and Allen Thomson, and Mr. Schäfer, Gray's *Anatomy* (Longmans), edited by Mr. Holmes; and Wilson's *Anatomist's Vade-Mecum*, tenth edition, by Dr. G. Buchanan and Mr. H. E. Clark of Glasgow (J. and A. Churchill). Messrs. Smith, Elder, and Co., announce the forthcoming publication on a work on *Human Morphology: a Treatise on Practical and Applied Anatomy*, by Mr. H. A. Reeves. For use in the dissecting-room, Ellis's *Demonstrations of Anatomy* (eighth edition, Smith, Elder, and Co.) has long established its claim as a trustworthy guide. It contains reduced copies of plates in the author's *Illustrations of Dissections*—a work which from its price the student can scarcely be expected to purchase, but which he should not fail to consult for assistance. Another good book for dissectors is Mr. Christopher Heath's *Practical Anatomy* (fourth edition, J. and A. Churchill). Dr. Cleland of Glasgow has also brought out a concise and accurate *Directory for the Dissection of the Human Body* (second edition, Smith, Elder, and Co.); and a *Dissector's Guide*, with illustrations, by Dr. D. J. Cunningham, is published by Maclachlan and Stewart of Edinburgh. Messrs. Hensman and Fisher's *Anatomical Outlines for the Use of Students in the Dissecting-room and Surgical Class-room* (Longmans and Co.) are useful. Braune's *Atlas of Topographical Anatomy*, translated and edited by Mr. Bellamy (J. and A. Churchill), is a valuable book for reference. The drawings are made from plane sections of foreign bodies. There is also Bock's *Atlas of Human Anatomy* (Renshaw); and Messrs. J. and A. Churchill have published a valuable *Atlas of Human Anatomy*, by Mr. Godlee. The same firm have published a third edition of Mr. Flower's *Diagrams of the Nerves of the Human Body*. *A Descriptive Atlas of Anatomy*, by Mr. Noble Smith, has been published by Smith, Elder, and Co. There are also the well-known Quain and Wilson's Anatomical Plates (Smith, Elder, and Co.) Mr. Thomas Cooke's *Tablets of Anatomy and Physiology* (new edition) contain much information in a condensed form, and give useful aid in the study of the larger works. To students who feel interest in the study of Zoology and Comparative Anatomy, we would recommend, as works that will give much information without being too large or costly, Mr. Flower's *Osteology of the Mammalia* (Macmillan and Co.), and Dr. H. A. Nicholson's *Manual of Zoology* and *Advanced Text-Book of Zoology* (Blackwood); as well as Huxley's *Manuals of the Anatomy of Vertebrated and Invertebrated Animals* (J. and A. Churchill), and Huxley and Martin's *Practical Biology*. Professor Gegenbaur's *Elements of Comparative Anatomy*, translated by Mr. F. J. Bell (Macmillan and Co.) is a larger work. For the study of Embryology, the chapter by Dr. Allen Thomson in Quain's *Anatomy*, or the *Elements of Embryology*, by Dr. M. Foster and Mr. Balfour (Macmillan and Co.), should be consulted. The subject is fully treated

by Mr. Balfour in a *Treatise on Comparative Embryology* (Macmillan and Co.)

For instruction in Histology, Mr. Schäfer's *Course of Practical Histology* (Smith, Elder, and Co.), and Dr. Stirling's *Text-Book of Practical Histology* (Smith, Elder, and Co.) are excellent guides; as is also the chapter on General Anatomy in Quain's *Anatomy*. A third edition of Dr. Rutherford's *Outlines of Practical Histology* (J. and A. Churchill) is in course of preparation. The *Atlas of Histology*, by Dr. E. Klein and Mr. Noble Smith (Smith, Elder, and Co.), is a valuable work for reference. Other works which may be consulted are Professor Stricker's collection of essays on *Human and Comparative Histology* (New Sydenham Society) and Heinrich Frey's *Histology and Histo-Chemistry of Man*, translated by Mr. Barker (J. and A. Churchill).

In Physiology, the beginner will find trustworthy guides in Huxley's *Lessons in Elementary Physiology* and Huxley and Martin's *Elementary Biology* (both published by Macmillan and Co.); and, as text-books for use in medical schools, Dr. McKendrick's *Outlines of Physiology in Relation to Man* (Maclehose, Glasgow; Macmillan and Co.; and Fannin and Co. Dublin); Kirkes's *Handbook of Physiology*, edited by Mr. Morrant Baker (J. and A. Churchill); and Dr. Michael Foster's *Text-book of Physiology* (new edition, Macmillan and Co.), are to be recommended; and, for more advanced students, Dr. L. Hermann's *Elements of Physiology*, translated by Professor Gamgee (second edition, Smith, Elder, and Co.); Flint's *Text-Book of Human Physiology* (H. K. Lewis); and Dr. Carpenter's *Principles of Human Physiology*, by Mr. Power (eighth edition, J. and A. Churchill). Dr. Burdon Sanderson has issued a *Syllabus of a Course of Lectures on Physiology* (second edition, H. K. Lewis). The increased study in recent years of Practical Physiology has led to the publication of several guides to this department. *An Elementary Course of Practical Physiology* by Dr. M. Foster and Mr. Langley (Macmillan and Co.) is a book that can be recommended to beginners; while the more elaborate *Handbook for the Physiological Laboratory*, by Drs. Sanderson, Klein, Foster, and Brunton (Churchill), is more fitted for those who desire an extended knowledge of practical physiology.

As guides in the use of the Microscope, there are Dr. Beale's *Microscope in Medicine*, Dr. Carpenter on the *Microscope* (fifth edition, J. and A. Churchill), Wythe's *Microscopist's Manual* (third edition Churchill), Marsh's *Section-Cutting*, (Churchill), and Martin's *Manual of Microscopic Mounting* (second edition, Churchill).

CHEMISTRY.

In Chemistry, among the most approved text-books, are Fownes' *Manual of Chemistry*, edited, in two volumes, Inorganic and Organic, by Mr. Watts (twelfth edition, J. and A. Churchill); Roscoe's *Lessons in Elementary Chemistry;* Miller's *Elements of Chemistry* (Longmans and Co.); Williamson's *Chemistry for Students* (Macmillan and Co.); and Tidy's *Handbook of Modern Chemistry* (J. and A. Churchill.) A little book by Mr. R. M. Murray, entitled *Chemical Notes and Equations for the use of Students* (Maclachlan and Stewart), gives an useful outline of the fundamental principles of chemical science. An elaborate *Treatise in Chemistry*, by Professors Roscoe and Schorlemmer, of Owens College, Manchester, is in course of publication by Macmillan and Co. Bowman and Bloxam's *Practical Chemistry*, seventh edition (J. and A. Churchill), has an established reputation as a practical guide.

For instruction in Physiological Chemistry, there are Dr. Ralfe's *Outlines of Physiological Chemistry* (H. K. Lewis), and Mr. S. W. Moore's *Notes of Demonstrations in Physiological Chemistry* (Smith, Elder, and Co.) Dr. Arthur Gamgee's *Text-Book of the Physiological Chemistry of the Animal Body* (Macmillan and Co.), of which the first volume has been published, is likely to become a standard work on this subject.

BOTANY.

The text-books of Botany in most general use are Bentley's *Manual of Botany* (third edition, J. and A. Churchill); Henfrey's *Elementary Course of Botany*, fourth edition, by Dr. M. T. Masters (Van Voorst); Balfour's *Manual of Botany* (A. and C. Black); Oliver's *Lessons in Elementary Botany;* Prantl and Vines' *Text-book of Botany*. Sach's *Text-book of Botany*, translated by Mr. A. W. Bennett and Mr. W. T. Dyer (Macmillan and Co.) is a valuable work of reference in regard to Structural and Physiological Botany. Bentley and Trimen's admirable plates of *Medicinal Plants* (J. and A. Churchill) should be consulted by the student both of Botany and of Materia Medica.

MATERIA MEDICA AND THERAPEUTICS.

A well-known and useful book as a manual of materia medica is Dr. Garrod's *Essentials of Materia Medica and Therapeutics*, edited by Dr. Buchanan Baxter (sixth edition, Longmans and Co.) It requires however, to be supplemented by a treatise on therapeutics; for which purpose Dr. Ringer's *Handbook of Therapeutics* (eighth edition, H. K. Lewis), Dr. Waring's *Manual of Practical Therapeutics* (third edition, J. and A. Churchill), Dr. Alexander Harvey's *First Lines of Therapeutics* (H. K. Lewis), Dr. Farquharson's *Guide to Therapeutics* (second edition, Smith, Elder, and Co.), and Dr. Sparks's edition of Binz's *Elements of Therapeutics* (J. and A. Churchill), are to be recommended. Dr. Milner Fothergill's *Practitioner's Handbook of Treatment* (second edition, Macmillan and Co.) will be especially welcome to those who are interested in the endeavour to show the agreement between science and practice. Dr. H. C. Wood's *Treatise on Therapeutics* (Smith, Elder, and Co.) pays special attention to the therapeutic action of drugs. Other useful books are Dr. W. G. Smith's *Commentary on the British Pharmacopœia* (Smith, Elder, and Co.), Royle and Harley's *Manual of Materia Medica and Therapeutics* (sixth edition (J. and A. Churchill), Neligan's *Medicines*, edited by Mr. Macnamara (Fannin and Co.), Dr. Scoresby-Jackson's *Note-Book of Materia Medica*, edited by Dr. Moinet (fourth edition, Maclachlan and Stewart, and Simpkin, Marshall, and Co.), Dr. Handsel Griffiths' *Materia Medica and Pharmacy*, edited by Dr. Duffey (Baillière, Tindal, and Cox; and Fannin and Co., Dublin), Dr. R. Bartholow's *Practical Treatise on Materia Medica and Therapeutics* (H. K. Lewis), Thorowgood's *Student's Guide to Materia Medica* (J. and A. Churchill), Milne's *Manual of Materia Medica and Therapeutics*, fourth edition, by Dr. W. Craig (Livingstone, Edinburgh; and Simpkin, Marshall, and Co.), and Dr. Phillips's *Materia Medica and Therapeutics* (J. and A. Churchill). Dr. Lauder Brunton's *Tables of Materia Medica* (Smith, Elder, and Co.) form a most compre-

hensive and valuable syllabus, and will be very useful to the student. So also are Dr. I. Owen's *Tables of Materia Medica* (fourth edition, J. and A. Churchill). Dr. W. H. Griffiths' *Lessons on Prescriptions, and the Art of Prescribing* (Macmillan and Co.) is an useful work. We have already referred, under the head of Botany, to Messrs. Bentley and Trimen's *Medicinal Plants*.

As text-books in the application of Electricity to Medicine, besides Dr. Althaus's *Treatise on Medical Electricity* (Longmans and Co.), the following are likely to prove useful to students; viz., a *Text-Book of Electricity in Medicine and Surgery*, by Dr. G. V. Poore (Smith, Elder, and Co.); a *Handbook of Medical and Surgical Electricity*, and *How to Use a Galvanic Battery*, by Dr. H. Tibbits (second edition, J. and A. Churchill); and Mr. A. de Watteville's *Practical Introduction to Medical Electricity* (H. K. Lewis).

PATHOLOGY.

As a manual of pathology, Dr. T. H. Green's *Introduction to Pathology and Morbid Anatomy* (Renshaw) has gained a deservedly high reputation. The *Lectures on Pathological Anatomy* of Drs. Wilks and Moxon (second edition, J. and A. Churchill), and Dr. J. F. Payne's improved edition of Jones and Sieveking's *Manual of Pathological Anatomy* (J. and A. Churchill), are also good books. An English translation of Virchow's treatise on *Post Mortem Examinations: the Art of Making them*, is published by J. and A. Churchill. Messrs. Smith, Elder, and Co. have published a *Manual of Necroscopy*, by Dr. A. H. Newth, which is intended as a guide to the performance of *post mortem* examinations. Dr. R. J. Lee has brought out a little book entitled *Pathological Anatomy: a Guide in the Post Mortem Room* (Richards, Great Queen Street). It is intended as an introduction to other works on the subject. We would also strongly recommend students to consult, and to possess, if possible, Rindfleisch's *Manual of Pathological Histology*, edited by the New Sydenham Society. Another highly valuable work for reference is Dr. Greenfield's translation of Lancereaux's *Atlas of Pathological Anatomy* (J. and A. Churchill). A *Manual of Pathological Anatomy*, by Cornil and Ranvier (Smith, Elder, and Co.), is in preparation.

MEDICINE.

For the student who is commencing his clinical studies there are several very good guide-books. Among them are Dr. A. W. Barclay's *Manual of Medical Diagnosis* (third edition, J. and A. Churchill), Dr. S. Fenwick's *Student's Guide to Medical Diagnosis* (fifth edition, J. and A. Churchill); Dr. O. Sturges' *Introduction to the Study of Clinical Medicine* (Smith, Elder, and Co.); Dr. Finlayson's *Clinical Manual for the Study of Medical Cases* (Smith, Elder, and Co.); Dr. J. Little's *Note-book for Students beginning the Study of Disease at the Bedside* (Fannin and Co.); and Dr. Warner's *Student's Guide to Medical Case-taking* (J. and A. Churchill.) More advanced students and practitioners may consult with advantage Dr. Da Costa's *Medical Diagnosis* (third edition, Smith, Elder, and Co.) As a guide in physical diagnosis, Dr. Gee's *Auscultation and Percussion* (Smith, Elder, and Co.) may be safely trusted. Other useful books for the same purpose are Flint's *Manual of Percussion and Auscultation* (J. and A. Churchill); and Dr. Reginald Thompson's *Physical Examination of the Chest in Health and Disease* (H. Renshaw).

Among text-books in General Medicine, which may be recommended for the use of the student, are Dr. F. T. Roberts's *Handbook of the Theory and Practice of Medicine* (fourth edition, H. K. Lewis), Dr. J. S. Bristowe's *Treatise on the Theory and Practice of Medicine* (third edition, Smith, Elder, and Co.), Dr. Tanner's *Practice of Medicine* (edited by Dr. Broadbent), Dr. Aitken's *Science and Practice of Medicine* (seventh edition, C. Griffin and Co.) Dr. H. Hartshorne's *Essentials of the Principles and Practice of Medicine* (Smith, Elder, and Co.), Dr. Flint's *Clinical Medicine* (J. and A. Churchill); and Dr. Charteris's *Student's Guide to the Practice of Medicine* (third edition, J. and A. Churchill). The advanced student and the practitioner will do well to consult Dr. Russell Reynolds' *System of Medicine* (five volumes, Macmillan and Co.); Trousseau's *Lectures on Clinical Medicine* (New Sydenham Society); Ziemssen's *Cyclopœdia of the Practice of Medicine* (Sampson Low and Co.); Dr. Niemeyer's *Text-Book of Practical Medicine* (H. K. Lewis): Sir Thomas Watson's *Lectures on the Principles and Practice of Physic* (Longmans and Co.)

SURGERY.

Mr. Erichsen's *Science and Art of Surgery* (seventh edition, Longmans and Co.), Mr. Holmes's *Surgery —its Principles and Practice* (second edition, Smith, Elder, and Co.), Mr. Bryant's *Practice of Surgery* (third edition, J. and A. Churchill), and Mr. Gant's *Science and Practice of Surgery* (second edition, Baillière, Tindal, and Cox), are all very complete works, one of which should be in the possession of the student. For those who prefer smaller and more condensed works, there is the well known Druitt's *Surgeon's Vade-Mecum* (eleventh edition, Churchill). Mr. Christopher Heath has brought out a *Student's Guide to Surgical Diagnosis* (J. and A. Churchill). Among the works more specially devoted to Practical Surgery, the late Sir William Fergusson's excellent *System of Practical Surgery* (fifth edition, J. and A. Churchill), holds the foremost place. Other books which may be consulted with advantage are, Mr. Holmes's *System of Surgery* (Longmans and Co.), Mr. Spence's *Lectures on Surgery* (A. and C. Black), Dr. S. D. Gross's *System of Surgery* (fifth edition, Smith, Elder, and Co.), and Billroth's *Lectures on Surgical Pathology and Therapeutics* (New Sydenham Society).

For the guidance of the student who is being instructed in practical and operative surgery, there are several good books. Mr. Christopher Heath's *Manual of Minor Surgery and Bandaging* (sixth edition, Churchill) has for several years enjoyed a high reputation as a trustworthy guide. The *Manual of Operative Surgery on the Dead Body*, by Mr. Thomas Smith and Mr. Walsham (Longmans and Co.); Mr. Berkeley Hill's *Essentials of Bandaging* (fourth edition, Smith, Elder, and Co.); Mr. Bellamy's *Student's Guide to Surgical Anatomy* (second edition, J. and A. Churchill); Mr. Joseph Bell's *Manual of the Operations of Surgery* (fourth edition, Machlachlan and Stewart); and Stimson's *Operative Surgery* (Lewis), are also works which can be recommended. Other larger works, most valuable for reference—and to be procured by the student if possible—are Mr. Jonathan Hutchinson's *Illustrations of Clinical Surgery*, consisting of plates, woodcuts, etc., illustrating surgical diseases, symptoms, accidents,

operations, etc. (published in fasciculi by J. and A. Churchill); Mr. C. Heath's *Course of Operative Surgery*, with coloured plates (J. and A. Churchill); and Mr. Norton's edition of Bernard and Huette's *Text-Book of Operative Surgery* (Baillière, Tindal, and Cox). For the student of Military Surgery, Surgeon-General Longmore's work on *Gunshot Injuries* (Longmans and Co.) and Surgeon-Major Porter's *Surgeon's Pocket-Book*, are essential. A translation, by Dr. Clutton, of Professor Esmarch's *Surgeon's Handbook on the Treatment of Wounded in War*, is also of value.

MIDWIFERY; AND DISEASES OF WOMEN AND CHILDREN.

The text-books of Obstetric Medicine which hold the first place in the present day are, Dr. W. S. Playfair's *Treatise on the Science and Practice of Midwifery* (third edition, Smith, Elder, and Co.); and Dr. Leishman's *System of Midwifery* (second edition, J. Maclehose, Glasgow). Every student should have one or the other of these. For those who prefer smaller books, Dr. D. Lloyd Roberts's *Student's Guide to the Practice of Midwifery* (second edition, J. and A. Churchill) will be useful; there are also Dr. Alfred Meadows's *Manual of Midwifery* (Renshaw) and Dr. C. H. Carter's translation of Karl Schröder's *Manual of Midwifery* (J. and A. Churchill). Drs. Robert and Fancourt Barnes are preparing a *Handbook on Obstetrics* (Smith, Elder, and Co.) As a work of illustrations, Dr. Martin's *Atlas of Obstetrics* and *Gynæcology*, edited by Dr. Fancourt Barnes (H. K. Lewis), is to be recommended. Dr. J. G. Swayne's *Obstetric Aphorisms* (seventh edition, Churchill) are very useful. Dr. Barnes's *Lectures on Obstetric Operations* (third edition, J. and A. Churchill) should be in the possession of every advanced student and general practitioner; as should also the *Clinical History of the Medical and Surgical Diseases of Women*, by the same author (second edition, Churchill). Dr. West's *Lectures on the Diseases of Women* (fourth edition, with additions by Dr. Matthews Duncan, (J. and A. Churchill); Dr. Graily Hewitt's *Diagnosis and Treatment of Diseases of Women* (third edition, Longmans and Co.); Dr. Matthews Duncan's *Clinical Lectures on the Diseases of Women* (J. and A. Churchill); the late Dr. F. Churchill's work on the *Diseases of Women* (sixth edition, Fannin and Co.); Mr. Lawson Tait's *Diseases of Women* (Williams and Norgate); Dr. Emmet's *Principles and Practice of Gynæcology* (J. and A. Churchill); Dr. Gaillard Thomas's *Practical Treatise on the Diseases of Women*; Dr. Heywood Smith's *Practical Gynæcology* (J. and A. Churchill); and Mr. Spencer Wells's treatise on *Diseases of the Ovaries* (J. and A. Churchill), are all valuable books. A manual on *Diseases of Women*, by Dr. Edis (Smith, Elder, and Co.), is in preparation. Other books which will be found useful are Dr. Galabin's *Student's Guide to Diseases of Women* (second edition, J. and A. Churchill); and Dr. Halliday Croom's *Minor Gynæcological Operations and Appliances* (Livingstone, Edinburgh; and Simpkin, Marshall and Co.)

Among text-books on Diseases of Children, must be mentioned Dr. West's well known *Lectures on the Diseases of Infancy and Childhood* (Longmans and Co.); Dr. Fleetwood Churchill's treatise on *The Diseases of Children* (third edition, Fannin and Co.); Dr. W. H. Day's *Manual on the Diseases of Children* (J. and A. Churchill); M. Guersant's *Surgical Diseases of Infants and Children*, translated by Dr. Dunglison (Smith, Elder, and Co.); Meigs and Pepper's *Practical Treatise on Diseases of Children* (H. K. Lewis); Dr. Eustace Smith's *Clinical Studies of Disease in Children* (J. and A. Churchill); Dr. J. L. Smith's *Treatise on the Diseases of Infancy and Childhood* (fourth edition, H. K. Lewis); Dr. Tanner and Dr. Meadows' *Practical Treatise on Diseases of Infancy and Childhood* (third edition, H. Renshaw); and Steiner's *Compendium of the Diseases of Children*, translated by Mr. Lawson Tait (J. and A. Churchill).

SPECIAL SUBJECTS.

There are several good text-books of the special departments which are taught in the schools.—For students of Psychological Medicine, the chief work is Bucknill and Tuke's *Manual of Psychological Medicine* (J. and A. Churchill).—For students of Ophthalmic Surgery, Mr. Soelberg Wells's *Treatise on Diseases of the Eye* (third edition, J. and A. Churchill); Mr. R. B. Carter's *Treatise on Diseases of the Eye* (Macmillan and Co.); Mr. Nettleship's *Student's Guide to Diseases of the Eye* (J. and A. Churchill); Mr. Macnamara's *Manual of Diseases of the Eye* (third edition, J. and A. Churchill); Mr. George Lawson's *Diseases and Injuries of the Eye* (Renshaw); Mr. B. T. Lowne's *Handbook of Ophthalmic Surgery* (Smith, Elder, and Co.), are books that will be useful. Messrs. Churchill have also published the second edition of a little book by Mr. Charles Higgens, entitled *Hints on Ophthalmic Out-patient Practice*. Dr. de Wecker's *Ocular Therapeutics*, translated by Dr. Litton Forbes (Smith, Elder, and Co.), may be consulted with advantage. Mr. E. A. Brown, of the Liverpool Eye and Ear Infirmary, has brought out a little book for instructing students *How to Use the Ophthalmoscope* (Trübner and Co.); and a valuable *Manual and Atlas of Medical Ophthalmoscopy* by Dr. Gowers (J. and A. Churchill) has been published.—In Aural Surgery, Mr. Dalby's book on *Diseases and Injuries of the Ear* (second edition, J. and A. Churchill) is very good; there is also a book by Mr. G. P. Field on *Diseases of the Ear* (second edition, Renshaw); while Dr. Burnett's work on *The Ear: its Anatomy, Physiology, and Diseases* (J. and A. Churchill), and Dr. St. John Roosa's *Practical Treatise on Diseases of the Ear* (fourth edition, H. K. Lewis) are valuable and elaborate works. Dr. Macnaughton Jones has brought out a good *Practical Treatise on Aural Surgery*, and also a well-executed *Atlas of the Diseases of the Membrana Tympani and Auricle* (J. and A. Churchill).—For the use of students in Dermatology, there is the late Dr. Tilbury Fox's treatise on *Skin-Diseases, their Description, Pathology, Diagnosis, and Treatment* (new edition, H. Renshaw). Mr. Malcolm Morris's *Manual of Skin-Diseases* is a very reliable guide. Mr. Erasmus Wilson's *Treatise on Diseases of the Skin*, and his *Lectures on Dermatology* (J. and A. Churchill) are well known and valuable works. Dr. Pullar has translated the *Text-Book of Skin-Diseases*, by Dr. Neumann of Vienna (Hardwicke and Bogue). Dr. R. Liveing's *Handbook on the Diagnosis of Skin-Diseases* (second edition), and his *Notes on the Treatment of Skin-Diseases* (fifth edition, Longmans and Co.), are well deserving of recommendation; so also is Dr. McCall Anderson's *Treatment of Diseases of the Skin* (Macmillan and Co.) Dr. Til-

bury Fox has supplied an excellent *Atlas of Skin-Diseases* (Renshaw); while a work with a similar title by Dr. Duhring of Philadelphia (Lippincott and Co.) is also very good.—For students of Dental Surgery, the following books are published by Messrs. J. and A. Churchill: Tomes's *Manual of Dental Surgery* (second edition); Tomes's *Manual of Dental Anatomy* (second edition); Taft's *Practical Treatise on Operative Dentistry*; Sewill's *Student's Guide to Dental Anatomy and Surgery;* Smith's *Handbook of Dental Anatomy and Surgery* (second edition); Stocken's *Elements of Dental Materia Medica and Therapeutics* (second edition); and Coles's *Manual of Dental Mechanics* (second edition). A *Manual of Dental Surgery and Pathology*, by Mr. A. Coleman, has been published by Smith, Elder, and Co.

FORENSIC MEDICINE AND HYGIENE.

As elementary works of convenient size, and containing valuable instruction, Dr. A. S. Taylor's *Manual of Medical Jurisprudence* (tenth edition, J. and A. Churchill), and Guy and Ferrier's *Principles of Forensic Medicine* (Renshaw) are to be recommended. The more advanced student and the practitioner should consult Dr. Taylor's *Principles and Practice of Medical Jurisprudence* (second edition, J. and A. Churchill); the *Handybook of Forensic Medicine and Toxicology*, by the late Dr. Bathurst Woodman and Dr. Tidy (J. and A. Churchill); Dr. Ogston's *Lectures on Medical Jurisprudence* (J. and A. Churchill); and the translation of Casper's *Forensic Medicine*, published by the New Sydenham Society. The last-named book describes the manner in which medico-legal investigations are carried out on the Continent.

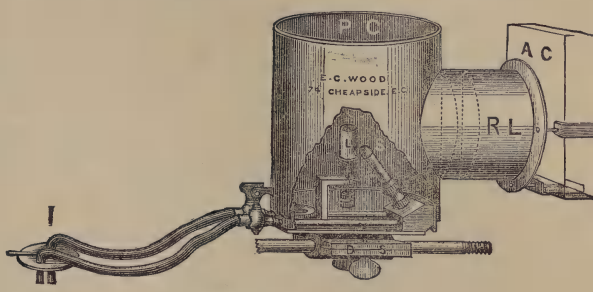
Under the head of Hygiene the principal books are, Dr. Parkes's *Manual of Practical Hygiene*, edited by Dr. de Chaumont (fifth edition, J. and A. Churchill); Wilson's *Handbook of Hygiene and Sanitary Science* (fourth edition, J. and A. Churchill); Dr. de Chaumont's *Lectures on State Medicine* (Smith, Elder, and Co.); Hart's *Manual of Public Health* (Smith, Elder, and Co.); and Hart's *Truth about Vaccination* (Smith, Elder, and Co.)

In June 1882, a second edition of Dr. Richard Neale's *Medical Digest*, the first edition of which was published by the Sydenham Society in 1876, will be issued. It will contain references to the papers which have since appeared in the various journals: to the list of which the *British Medical Journal*, the LONDON MEDICAL RECORD, and the *Practitioner*, will be added. It is intended to publish the work by subscription, at 13s. 6d.: the publishing price to non-subscribers being 18s. The object of the work is to supply the busy practitioner with most that is known on any case with which he may meet; and it has been found highly useful by many as a work of reference. The vast amount of labour and care bestowed on it by the author is such as can scarcely be fully understood except by those who have engaged in similar work; and we feel it a duty to earnestly recommend our readers to recompense Dr. Neale by announcing to him their desire to possess the book.

NEW INVENTIONS.

LENNOX BROWNE'S LIMELIGHT ILLUMINATOR.

This apparatus, intended for use in the examination and treatment of laryngeal, aural, nasal, and ophthalmic cases, is the invention of Mr. Lennox Browne, F.R.C.S. Ed. Senior Surgeon to the Central London Throat and Ear Hospital, etc., London, and is manufactured by Mr. E. G. Wood of Cheapside. It is extremely simple, and is arranged to fix on to the ordinary gas standard usually employed, and does not require any cumbersome arrangement of lantern. A notable advantage in this appliance is, that, should the light temporarily fail from any cause, and a further supply not be obtainable, the whole can be disconnected in two minutes, and the gaslight at once be made available. It can be used either as a direct light, or



with the usual frontal or hand reflector, a point of considerable importance, as reflected light is infinitely preferable where it is desired to follow even slight movements of the patient; and the surgeon can warm his mirror over the lamp, instead of having a second one for that purpose. It is absolutely safe, as the hydrogen and oxygen are conveyed in separate tubes, even to the point of ignition, and the light is free from the hissing noise observable in most of the methods hitherto employed. An important feature in the apparatus is the absorption-cell—a glass tank, with parallel sides held by metal clips in front of the rectifying lenses, and marked A C in the drawing. There is sufficient space between them to allow a free interchange of air. This cell is filled with water, which will not require to be changed unless the apparatus is being used for long periods without intermission, and the water may attain a considerable heat without interfering with its efficiency. The difference in the degrees of heat if the tank is removed is most marked: a thermometer placed within an inch or two of it will be seen to rise rapidly from 40 to 60 deg. The limelight illuminator has evidently been thought out with a great amount of care by the inventor, and the name of the maker is a sufficient guarantee as to its superior make and finish.

DR. E. DIVER'S OBSTETRIC DRESS.

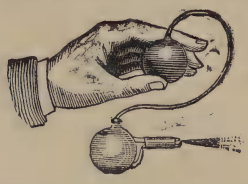
THIS ingenious apparatus, called by the inventor 'The Tocophelia, or couchaide', is designed to utilise the habit which parturient women have of pulling during their pains. The patient, by means of it, is able to accomplish for herself firm pressure to the back where such pressure is grateful, also an even and comfortable support to the uterus; and she is provided with a resting surface for the feet in any

part of the bed. For the act of pulling, this apparatus has a soft woollen cable of suitable thickness. At the end of the cable is a pulley through which a cord runs, and thence through a ring in each of a pair of stirrups, made of broad canvas, for the feet. From the stirrups, the cord is conducted on each side of the patient to a cushioned pad placed over the back, and from this it passes to an abdominal belt, in such a manner that, when she pulls, the cushion is firmly pressed against the back, and the uterus is supported by the abdominal belt. As soon as the patient ceases to pull, the pressure is relaxed; therefore the support is given just when it is wanted, and where it is felt to be useful. The obstetrician will at once perceive the value of this apparatus for almost all ordinary cases of labour, from the beginning of the second stage to the expulsion of the placenta; and afterwards, if needs be. As an abdominal support, it is especially useful in cases of multiparæ, and in plural births; also where the abdomen is pendulous, where hæmorrhage is to be apprehended, or generally where the uterus requires support. On account of the steadiness of the support given to the uterus by this appliance, it is always better than the hand of the accoucheur, who is thus left free to aid in any manner he may see fit. The nurse is also relieved.

The length of the running cord can be adjusted at pleasure by altering the position of the knot near the end. The apparatus is most easily put on; and is taken off without in any way disturbing the patient. To put it on, draw the pads apart and put on over the head, arranging the abdominal belt over the womb and the cushion over the back where the pressure is needed. The feet, with the shoes on, are then placed in the stirrups, and the cable taken in the hands. To take off, simply unbuckle the back cushion (thus separating it from the abdominal belt), and slip the feet out of the stirrups. If back pressure be desired without any abdominal support, this may be obtained by knotting that part of the running cord where it leaves the cushion on its way to the belt. The force supplied is so arranged by the mechanism of the apparatus that distinctly more pressure is given to the back than to the front of the body. This apparatus, which weighs less than a pound, is, when in use, entirely out of the way of the obstetrician, and can be worn in any position—walking, standing, sitting, or lying. The price is one guinea (cash); or with a long cable, 2s. 6d. extra. The long cable round the bed-post can be detached where it passes the middle of the body; the pull is then directly from the feet. The principle is well understood and ingeniously carried out, and we should like to see a fair trial of the invention impartially recorded. The apparatus may be ordered of any surgical instrument makers. It can also be obtained of Messrs. Millikin and Down, St. Thomas's Street, Borough.

MESSRS. BOURNE AND TAYLOR'S NEW INVENTIONS.

Messrs. Bourne and Taylor, Castle Street, Holborn, have several new small appliances of merit. Amongst these is a 'simple' pill-coater, for coating any small quantity, from one dozen to a quarter of a pound. It is made in the form of a small oval box, with handle for the fingers to pass through, and is an outcome of a suggestion of Dr. Symes. By using certain solutions and merely shaking the box for a few minutes, the operation is effectually performed. A new tin-floating light, with reflector, will be found a most useful addition to the nursery or bedchamber. A new and cheap throat or perfume spray-producer is also worthy of notice. It consists of a glass container with two tubes, one from the lower, the other at the upper parts, almost impinging at their points, to which is attached an ordinary India-rubber tube and inflater. There are no metallic parts to corrode, it is effective in action, and is, we



believe, the cheapest article of its kind in the market. Dr. Taylor's glass-inhaler is no less worthy of note, as providing a cheap, clean, and inexpensive article for such purposes, that is within the reach of all classes as regards price. It is a small bottle with wide mouth, and wooden-covered cork-stopper. Into this two glass tubes are inserted, one, a bent one, being for inhalation. The bottle has to be half filled with the infusion, and the cork replaced when it is ready for use. As it is made entirely of clear glass, dirt is immediately discernible, and it can be easily kept clean. Being of so small a size it will prove a boon to invalids travelling, and should command a large sale.

CALVERT'S CARBOLIC VAPORISER.

This is a simple little apparatus, supplying an efficient means of diffusing the vapours of carbolic acid in hospital wards, sick-rooms, and infected houses. It has also been found most effective when used in cow-sheds, shippons, and stables, in the former during the prevalence of foot and mouth disease, pleuro-pneumonia, and tubercular diseases, and in destroying bronchial worms in sheep, and, in the

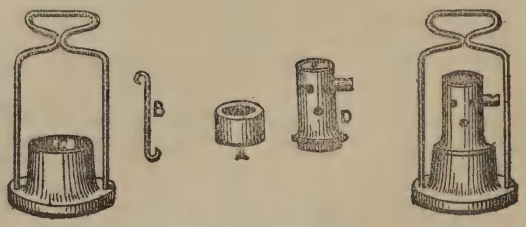


Diagram No. 1 showing various parts of Vaporiser.

Diagram No. 2 showing Vaporiser ready for use.

latter, as a preventive of epidemic diseases and injurious odours; and it has been awarded a certificate of merit by the Sanitary Institute of Great Britain. It is made in two sizes, holding four and eight ounces respectively. Our engravings exhibit the various parts. The iron-heater, A, is placed in a fire until it becomes red-hot, when it is removed by the hook, B, and placed in the box, C; the top, D, is then placed firmly over the heater, and it then appears as in diagram, No. 2. It is inexpensive, and, from its portability, will be found a very useful adjunct to the household as well as the hospital.

Messrs. Calvert and Co., whose works are at Bradford, Manchester, are well-known makers of carbolic acid, and the vapour from it causes no in-

jury to clothing, furniture, or pictures, and may be inhaled with perfect safety. Their carbolised tow is still an undisputed favourite, and the carbolic soaps, made by the same firm, have a large and increasing sale.

SURGICAL APPARATUS.

The five articles described below were shown by Mr. K. R. Schramm in the International Medical and Sanitary Exhibition.

NEW CLAMP OR CLAW FOR AMPUTATION BELOW THE ELBOW.—This is intended to supersede the common hook, and consists of three pieces of steel, representing the first three fingers, slightly bent at the ends, rounded off like the ends of a finger, the ends being rough like a file. Another piece of steel, representing the thumb, is hinged, and is opened and shut by means of a strong hinged screw. By means of this claw a shoe-brush can be firmly held, so that a man is enabled to earn a living by cleaning boots. A broom, brush, oar for rowing, etc., can be held securely; also various tools. The apparatus resembling three fingers and a thumb, provides the means of holding them firmly. It can be further improved by adding a ball and socket-joint which can be fixed at any angle.

REEVES' UNIVERSAL TALIPES SHOE.—This shoe has found favour with those who have seen it; and we are informed that orders for it are received from all parts of the country—a substantial proof of its value. Although it has been introduced some time, it appears to be not yet known to the majority of the profession.

SCHRAMM'S UNIVERSAL TRUSS.—This truss is made on the same principle as the shoe above-mentioned. The pad can be fixed at any angle. It is intended to be a hospital and dispensary truss for slight cases. It is intended for femoral and inguinal hernia on the right or the left side. It is also suited for scrotal hernia, by making a different shaped head.

NEW OPERATING TABLE.—This table, made by A. Sandoz of Neuchâtel, Switzerland, answers every requirement in regard to easy manipulation, elegance, and strength of construction. It can be put in any position; and by means of a large wheel, which is under the table, it can be made longer or shorter, higher or lower. The position can be altered without removing the patient or causing him any pain. It rests on a heavy cast-iron foot, in the centre of which is a strong upright piece, in which works a large screw, mounted by a fly-wheel. At the four corners of the feet are hinged steel tubes, in which are pistons for lengthening and shortening. The four ends of these pistons carry a frame, also of steel tubing, and pistons for elongating. The pistons can be fixed by a powerful screw-collar. A head-piece or back-piece which works in a segment, and five oak-wood boards, which are fixed by hooks, complete the table. The whole is nickel-plated, except the foot.

THE PELVIC BAND.—This appliance ought to be better known, because the results are, it said, very satisfactory in the great majority of cases. It is made for cases of debility, the first stage of curvature, internal displacements, and pendulous abdomen. It is extremely light, and acts as a gentle spring, tending to put the displaced parts in proper position by gentle pressure.

Dr. Protheroe Smith is the inventor of the band, which has lately been greatly improved in construction, durability, and usefulness. The same principle is carried out by means of similar appliances, with the best results, by Mr. H. H. Bigg of London; Dr. Banning, America; Herr Nyrop of Copenhagen, etc.

LYNCH AND CO.'S SPECIALITIES.

Messrs. Lynch and Co., of 192, Aldersgate Street, E.C., have introduced the following appliances.

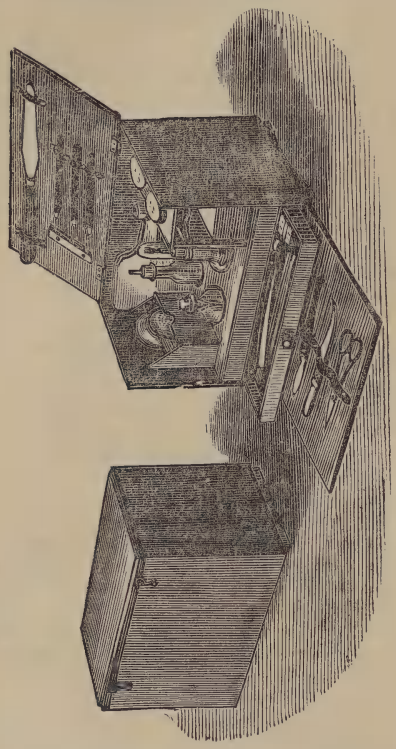
THE HOUSEHOLD SYRINGE is one very suitable for the general practitioner, as, in addition to the usual pipes for the rectum and vagina, there are also douche pipes for the eye, ear, and nose. The whole is enclosed in a neat mahogany box. Price to the profession, 7s. 6d. each.

THE FAMILY PERFECTION ENEMA SYRINGE is a most useful instrument, having elastic pipes for children and for the vagina, as well as the usual rectum pipe for adults.

ADAPTABLE TRUSS, by which the pressure of the spring can be increased or lessened, and the angle of the pad altered so as to make it suitable for the various kinds of hernia.

PHYSIOLOGICAL MOUNTING CABINETS.

Mr. J. B. Medland, of the Borough High Street, has recently introduced some very cheap and complete cabinets for the physiological student, and for those more advanced in the science, that must commend themselves to all interested in it. We illustrate one open, and closed, which gives a good idea of the contents, which we may broadly say contain everything that is necessary, even the trays to hold six dozen specimens. The idea suggested to the inventor by Mr. C. H. Golding-Bird, Dr. Harris, and other demonstrators, was to fit up in a case of the



most portable character all the instruments and other appliances required in prosecuting the science, which have hitherto been carried loose by the student. The advantages of having everything at hand, and obtainable at a price little over the cost of the appliances themselves, is so great, that we anticipate a large sale for the Medland Cabinets ; and no excuse can now be tolerated in class for the absence of anything required, as there is a place for everything, and nothing appears to have been forgotten. Mr. Medland also supplies very cheap cabinets, containing six dozen trays in mahogany, and another of polished pine, with skeleton trays to take the glass ; the advantage of this being, that the specimens required may be seen more readily than in those with solid bottoms.

CLINICAL THERMOMETER.

A clinical thermometer, lower in price than any yet introduced, has just been brought out by Messrs. Joseph Davies and Co., the well-known meteorological instrument makers, Fitzroy Works, Kennington Park Road, of which we append an engraving. There is no novelty about it save its price,

the name of the makers being a guarantee as to quality. It is sent out either in ebony or nickel silver case, and is a compact and attractive-looking little article.

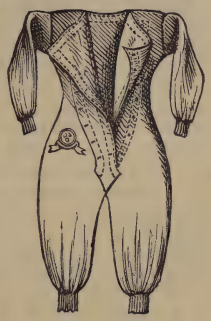
A HYGIENIC PERFUME.

Murray and Lanman's 'Florida Water', which has stood the test of eighty years' life in the United States, has recently been introduced here by Messrs. Burroughs, Wellcome, and Co., Snow Hill, E.C. It is of the Cologne character, but possesses a more delicate fragrance than the Rhenish perfumes. At the same time it is antiseptic and well adapted for purifying the atmosphere of the sick room. It is most popular throughout the entire American continent ; and since its introduction into the principal European cities, it has largely superseded the Eau de Colognes. In the tropics, where it is used extensively in the bath, it is looked upon as a necessity, from the invigorating and refreshing properties it exercises upon the system, and for all the purposes Eau de Cologne is applicable, Florida water will be found its compeer.

HYGIENIC CLOTHING.

During the last ten years public opinion in Germany appears to have been much interested in a theory propounded by Professor Gustav Jaeger of Stuttgart, who, in several articles published in *Immunity from Epidemics and Constitutional Vigour*, and in *The Working Power of Man*, advocated a radical change in the clothing of the whole human race. The arguments urged by the Professor met with much approval from leading medical practitioners, and it then only became necessary to introduce the system which he has called 'normal' or 'rational' clothing to submit it to practical tests. Having patented his idea, not only in Germany and Austria, but in England, America, and most European countries, he selected Messrs. Wm. Benger and Sons of Stuttgart to manufacture the clothing, the use of which has since spread rapidly through Germany and Austria, and has now reached our country. Dr. Jaeger starts with the theory that our present system of clothing is unsound in principle, and in many instances injurious to the health of the body and vigour of the mind. He urges that all cotton, linen, or mixed material should be discarded, as not being capable of absorption, and tending to obstruct the natural process of evaporation. He, therefore, selects sheep's wool as the proper constituent of his hygienic garments. The advantages of this material are obvious, as wool, when woven into tissues, possesses, above all textile fabrics, a peculiar power of absorption, and of acting as a non-conductor, preserving an equable temperature of the body. But wool fabrics, as they have hitherto been woven, are, to many persons, highly objectionable, irritating the skin, and from the principle on which they are made, not allowing that free escape for the exhalations which the inventor aims at providing ; besides which they are heavy, and can scarcely be worn in the summer, which offers another difficulty to the

theory, viz., that the same garments should be worn all the year round. It, therefore, became necessary to alter the whole process of weaving, which has been done by preparing them on the principle known as stocking-net, which is woven more loosely. Space prevents our going minutely into particulars of all the garments advocated, consisting of outer as well as under-clothing, which is partly unnecessary at present, as only the under-garments are offered to the English public. The clothing, of which we append an engraving of a combination garment, is



made in shirts, chemises, or combination garments for both sexes of all ages. In appearance and feel they are very similar to spun silk, and from actual experience we can confidently assert that no garment hitherto made is so comfortable to wear. They are perfectly soft, and will not irritate the most delicate skin; and in the case of shirts the folds adapt themselves to the body in the most comfortable manner. No garment opens in the front. All are, so to speak, double-breasted, and button at the sides and the shoulder. They may be worn through the heat of summer with comfort and without any of the unpleasantnesses attaching to merino, cotton, or spun silk garments; and in colder weather they appear to maintain as much warmth as the heavier wool clothing. Although they have been but a short time here, great success has attended the introduction, and from the medical profession, in particular, orders are flowing in from all sides. The representatives of the makers, Messrs. Newberger and Co., 53, Wood Street, Cheapside, will be pleased to give every information respecting them.

AN IMPROVED REGULATING DIGITORIUM.

An improved regulating digitorium was shown at the recent Medical and Sanitary Exhibition, by Messrs. Horn and Son, 46, Elgin Road, Croydon. It is distinguished from others by three special novel features, viz., the regulating the depth of touch, the regulating of pressure, and an index showing the progress made. It consists of a case containing five or more notes like piano keys, across which is a rail called the key rail, which, being attached by a hinge to each side of the case, may be raised and lowered, thus varying the depth of touch of the notes from a quarter to seven-eighths of an inch. The object of this arrangement is to afford the patient an opportunity of exercising the extensor muscles, apart from the nerve-power required to press various degrees of resisting force. Springs are used to regulate the pressure or resistance of the notes, travelling in a groove underneath the note, these springs being fixed to a rail called the spring rail, which is moved forward to increase the pressure, and backward to diminish it, by means of a screw. Tampering is prevented by means of a key, which may be kept by the medical attendant when the screw is set. An index provided at the side of the instrument, having a pointer which is in connection with the springs and spring rail, shows the progress made in a range of twelve points, the lightest being lighter than a piano note, and the heaviest greater than an organ with all the manuals coupled. This instrument will be sure to find favour with the profession.

ALBISSIMA PAINT.

Attention has recently been directed to sanitary paints through the death of a gentleman said to have taken place by being poisoned through remaining in his house during the time it was being repainted; and it has been urged that, had a sanitary paint been used, it would not have happened. In drawing attention to 'Albissima', a pure white paint, we may add that it is perfectly innocuous and free from lead and other poisonous ingredients, and, on that account, may be used in private houses during the residence of a family without unpleasantness or danger. For these reasons, it is strongly recommended for hospitals, public institutions, and the like. Its covering power is also greater than any other paint, and, owing to its smoothness, it works freer under the brush, and is, consequently, more economical in all its phases. Beautiful tints may be obtained by admixture with various non-poisonous colours, and there is no necessity to use any of those containing arsenic, or other deleterious ingredients. Among the institutions that have recently been repainted with 'Albissima', we may mention the Colston Lunatic Asylum, some of the School-Board buildings, and Highgate Infirmary; and it has also been used in the Houses of Parliament. At the International Sanitary and Medical Exhibition, the only award for paint (of which many were exhibited), viz., the Award of Merit, was given to the Albissima Paint Company, Lime Street, London, E.C.

DIETETIC NOVELTIES.

FELTOE AND SON'S 'SPÉCIALITÉ' LIME-JUICE.

This wholesome preparation of the Lime Fruit is non-alcoholic, requires no sugar, and is remarkable by reason of three great merits, viz.:—it is free from sulphuric acid; it is free from the musty flavour so often found; and it will not turn mouldy. It will, we are assured, keep for any time sound and bright in all climates after it is uncorked. Taken with filtered or aërated water, it makes a delicious drink.

Another great point in its favour over many of the non-alcoholic drinks is, that it contains no pharmacopœial drug. The medical profession largely condemn the habitual use of phosphorus and iron, included in many of the effervescing drinks now extensively announced. They accumulate in the system, and are not considered free from danger.

This lime-juice is introduced by the well-known firm, Messrs. Feltoe and Sons, whose 'Spécialité' sherry has gained an extensive reputation among professional men and the public generally.

COURT ST. ETIENNE WATERS.

The Court St. Etienne Arsenical Water is one of the most valuable medicinal waters ever introduced to the notice of the profession. It is an arsenical water of great power and richness, combined with the chlorides of calcium, sodium, and nitrate of calcium. The exact analysis is as follows:—

Chloride of Sodium	1.80
Chloride of Calcium	0.34
Nitrate of Calcium	3.03
Sulphate of Calcium	6.26
Sulphate of Potassium	0.39
Iron (Ferric Oxide)	0.35
Silica	0.60
Carbonate of Calcium	2.07
Carbonate of Magnesium	1 03
Organic matter and loss	0.80
Lithia	traces
Arsenic (AS^2 0.5 Arseniate of Sodium)	0.83
Total	17.50

The value of such a water is self-indicated in a great variety of forms of debility, cutaneous diseases, and nerve disorders, as well as in respiratory affections. The range of therapeutic utility of arsenical medication is constantly widening with fresh clinical research. Just now in France, it is almost universal. Admitting that there may be some exaggeration in this, it is certain that the utility of an arsenical water, so rich and so happily constituted, must be very extended and considerable. Court St. Etienne Water deserves the earnest attention of the enlightened therapeutist as a valuable addition to our resources. The agent for Great Britain is E. Watteeu, Royal Exchange, Middlesborough.

ZOEDONE.

Zoedone is a sparkling beverage containing phosphates of calcium, sodium, and potassium, and a minute proportion of iron. It is a non-alcoholic drink, possessing the tonic qualities of the medicinal substances above mentioned. Zoedone, *sans sucre*, is prepared expressly for diabetics, and does not contain the smallest trace of sugar.

MISCELLANY.

DR. SPIEGELBERG, the eminent professor of Obstetric Medicine in the University of Breslau, has lately died at the age of 51.

THE HON. T. A. SCOTT, the railroad magnate, has given fifty thousand dollars to the University of Pennsylvania and the same amount to Jefferson Medical College.

THE CLEANLINESS OF ELECTRODES.—In the *New York Medical Journal* for June 1881, Dr. Frank P. Foster calls attention to the general neglect of cleanliness in the matter of electrodes, and remarks that cleanliness may be secured by simply providing separate coverings for use with each patient, and by choosing electrodes so fashioned that the coverings may easily be removed from them, and others applied. The coverings that are used with any particular patient may be kept in an envelope, or other convenient receptacle, upon which the patient's name should be written. Felt is an excellent material for covering electrodes, for it readily imbibes water, and keeps wet for a long time. Indeed, so long does it remain moist that in warm weather it is apt to become mouldy within a few hours, unless it is left exposed in a dry place after having been used. Such exposure is advisable also for another reason—if the wet coverings are at once put back into the instrument case, the water that evaporates from them may rust any articles of steel that the case may contain. The author then describes several forms of electrodes that admit of readily changing their coverings, and that may be made by practitioners themselves at a very trifling expense.

SIR ISAAC NEWTON ON THE VALUE OF SLEEP.—The following quaint letter from Sir Isaac Newton to a medical friend has only been recently published:—

'*London, December 15th*, 1716.

'Dear Doctor—He that in ye mine of knowledge deepest diggeth, hath, like every other miner, ye least breathing time, and must, sometimes at least, come to terr: alt for air. In one of these respiratory intervals I now sit doune to write to you, my friend. You ask me how, with so much study, I manage to retene my health. Ah, my dear doctor, you have a better opinion of your lazy friend than he hath of himself. Morpheous is my best companion; without eight or nine hours of him y'r correspondent is not worth one scavenger's peruke. My practizes did at ye first hurt my stomach, but now I eat heartily enow as y' will see when I come down beside you. I have been much amused by ye singular *φενομενα* resulting from bringing of a needle into contact with a piece of amber or resin fricated on silke clothe. Ye flame putteth me in mind of sheet lightning on a small—how very small—scale. But I shall in my epistles abjure Philosophy whereof when I come down to Sakly I'll give you enow. I began to scrawl at 5 mins fr'm 9 of ye cl'k, and have in writing consumd 10 mins. My Ld. Somerset is announced.

'Farewell, Gd bless you and help y'r sincere friend,

'(Signed) ISAAC NEWTON.

'To Dr. Law, Suffolk.'

LADY MEDICAL STUDENTS.—The committee of the Gloucester Infirmary have decided that lady students shall be admitted to the practice of the hospital. The question had been previously referred, on application, to the Medical Board, which dceided in favour of the admission of ladies. It is decided that at first only two should be admitted at one time to be pupils, and that six months' trial be made to see how these worked. The committee approved the recommendation of the Medical Board.

FRENCH BIOLOGICAL RESEARCH.—Last year, three embryos of the whale, along with a heart and various soft organs of that cetacean (pieces very rarely met with in European collections), were sent to the Paris Museum of Natural History by M. Sven Föyn, proprietor of the whale fishery of Vadsö, on the east coast of Finmark. M. Pouchet has now been charged by the French Government to go to Vadsö and collect natural history objects. The advice-boat Le Coligny is placed at his disposal, two licentiates in science from Lille accompany him, and he will be joined by a biologist from Christiania. The local authorities have been instructed to forward the scheme. The naturalists will investigate the fauna, flora, and rocks on the banks of the Varanger fjord, also the maritime fauna of this fjord, situate at the boundary of influences of the Atlantic and the Glacial Sea. The fauna of fresh waters will also claim attention. Among questions to be more especially studied are the time of maturation and hatching of the ova in marine species, and the influence of a permanent day of two months on the daily periodic activity of certain animal and plant species.

The London
Medical Record.

WAGNER ON THE TREATMENT OF EMPYEMA.

Dr. W. Wagner of Königshütte, in commenting on a case of empyema successfully treated by operation under antiseptic conditions (*Sammlung Klinische Vorträge*, No. 197), states that the treatment of this affection has now reached a fresh stage; and that, since the introduction of Listerism, an operation, instead of being a mere palliative measure, is to be regarded as justifiable under all circumstances, and, in cases of simple empyema at least, as free from risk.

The surest way, Wagner asserts, of distinguishing an empyema from a simple pleuritic exudation, is to make an exploratory puncture. This may be done with a disinfected hypodermic syringe and trocar, or, better still, with a larger syringe, such as that used by veterinary surgeons, which holds about five grammes of fluid, and is furnished with a strong and large needle. The exploratory puncture, however, does not always guard against errors in diagnosis. In the first place, a case may be met with in which there are two separate and distinct exudations, one a serous, the other a purulent exudation. Then, again, it may happen, especially in cases of exudation, originally serous or seropurulent, that have become purulent, that the exploratory puncture will give vent to serous fluid in the upper part of the collection and to purulent fluid below. In a patient lying constantly on his back, this precipitation will take place not to the inferior but to the posterior part of the thoracic cavity, so that serum will be present in front and pus behind. Dr. Wagner, though acknowledging that cases of this kind are rare, lays it down as a rule that, in every case of pleural exudation in which the general symptoms indicate empyema, several exploratory punctures should be made at different parts of the corresponding thoracic wall, should it happen that at the first or earlier punctures serum and not purulent fluid is withdrawn.

At the present day, no medical man believes in the possibility of the absorption of a purulent pleural exudation. The so-called 'natural cure', in which the pus is discharged through the air-passages, is of rare occurrence, and, when it does occur, is likely to have bad results, and to give rise to phthisis through the contact of the discharge with the lung-tissue, or through its aspiration into the fine bronchial divisions. Spontaneous discharge of an empyema through the thoracic wall cannot be regarded as a favourable termination, as it is often followed by an obstinate fistula.

In a case of well-marked empyema there is, in Wagner's opinion, an almost unconditional indication to operate at as early a date as possible. Unless the affected pleura covering the lung be soft and yielding, and the lung itself be capable of complete re-expansion, the chances of a speedy and good cure will not be favourable. An acute pneumonic infiltration still persisting, whether to a high or low degree, should not prevent early recourse to operative treatment, for with removal of the empyema the pressure on the lung is removed. This organ is thus set free, and as its normal conditions of circulation become re-established, the absorption of the inflammatory exudation is favoured. If the inner wall of the abscess be stiff and unyielding in consequence of thickening of the pulmonary pleura, then cure cannot be effected speedily, and cannot possibly occur at all, unless the resistance of the thoracic wall or that of the tough pulmonary pleura can be overcome. Wagner sums up his remarks on this subject by stating that, when we operate in the early stage of empyema, we meet with the most favourable conditions for the re-expansion of the lung, and for the approximation of the walls of the abscess. The older such an abscess, the thicker will be its walls, and the greater difficulty will there be in the obliteration of its cavity. In the application of the above rule, it is, of course, to be understood that the operation be performed under antiseptic conditions. Dr. Wagner is not in favour of treating empyema by simple puncture and aspiration. Such treatment may occasionally prove successful, especially with young children, in which class of patients there is likely to be a rapid re-expansion of the lung after removal of the purulent fluid; but it is attended with this disadvantage, that, as it is almost always impossible thus to remove all the pus, there is likely to remain a small quantity of this secretion, the presence of which invariably causes a relapse of the empyema. The rule is laid down by Wagner that it is not justifiable to try puncture more than once in a case of empyema, and that, if this first attempt do not succeed, the surgeon ought without delay to have recourse to incision. The longer an empyema is allowed to run its course, the less favourable become the chances of a cutting operation, and with repetition of simple puncture valuable time is lost.

Though an incision through the thoracic wall low down in the back of the chest may be most favourable for a full discharge during the operation, and in the course of the after-treatment, yet, Dr. Wagner holds, this situation can hardly be regarded as being under all circumstances the best in the operation for empyema. The inferior and posterior part of the affected pleural cavity is often obliterated in consequence of pleurisy, and the space may be so contracted through approximation of the elevated diaphragm and the inner wall of the thorax, and also through re-expansion of the lung, that free discharge of pus from the pleural sac is prevented. Dr. Wagner prefers an incision in the fifth or sixth intercostal space, near to the edge of the latissimus dorsi muscle; and in order to promote a free discharge during the after-treatment, he keeps his patient lying on the side, with the pelvis and lower part of the trunk elevated on a firm pillow.

In the cutting operation for empyema, Dr. Wagner recommends the administration of an anæsthetic. With anæsthesia, the surgeon is less likely to be disturbed through restlessness of the patient, and he may, if it be found necessary, proceed without delay to resect a portion of rib. Care, however, must be taken that the movements of the chest on the sound side are not impeded during the operation. Sudden death, which has occurred in some cases of empyema during operation, cannot, it is stated, be attributed to the anæsthetic. It has been due rather to some disturbance of circulation (thrombosis, cerebral anæmia, embolism of the pulmonary capillaries, pulmonary congestion, or œdema). These instances of sudden death have occurred as frequently during simple thoracentesis without anæsthesia, as in cutting operations for empyema.

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The details of the cutting operation are very simple. The surgeon either makes an incision through the skin about two inches in length along the upper margin of a rib, and then slowly divides the muscles until he reaches the pleura, which he opens with a small bistoury; or, following König's practice, he resects subperiosteally a portion of rib about one inch in length, and then opens the thoracic cavity by incising the posterior layer of periosteum and the pleura. This latter operation should always be performed when the intercostal space is not of sufficient width to admit of the passage of a wide drainage-tube. It is not likely to be attended with any bad result, and in young subjects the resected portion of rib is almost always wholly replaced.

During the flow of pus, which should not be allowed to take place too rapidly, the surgeon should carefully examine the fluid, and also introduce his finger through the opening into the pleural cavity, in order to ascertain the condition of the surrounding wall. He thus endeavours to make out indications for future treatment. If the purulent discharge be free from smell, and do not contain flakes, no injection need be made into the sac; but if, on the other hand, it be fetid, and be mixed with large and numerous fibrinous masses, then it is necessary to wash out the cavity. Dr. Wagner now uses in such cases a 7 per cent. solution of boracic acid. If the walls of the purulent sac be felt to be thick and rough, and if they be evidently covered by adherent masses of fibrine, then it is necessary to wash out the cavity thoroughly and repeatedly with strong antiseptic solutions, which, in order that chilling may be avoided, should be warmed before they are injected. It is advisable, in dealing with such a condition, to make a second opening into the thoracic cavity.

When the pleural cavity has been opened, relieved of its purulent fluid, and washed out, or, as should always be done in simple cases of pyæmia and with children, has been simply emptied, a piece of drainage-tube of wide calibre, the length of which need not be more than two inches, should be inserted into the wound. Across this tube, near its outer extremity, a needle is thrust. This prevents the tube from falling into the thoracic cavity, whilst two sutures applied to the margins of the external wound and tied around the needle prevent it from being forced outwards. During the operation and immediate dressing, and also during subsequent dressing, Dr. Wagner guards the exposed parts by the carbolic acid spray. The first dressing, by which the whole of the affected side of the chest is covered, and which reaches from the axilla to the pelvis, consists of thick layers of Lister's gauze and of salicylated wadding. The first dressing ought not, it is stated, to be allowed to remain for a longer period than twenty-four hours, even though no secretion has made its way to the surface. The surgeon should then make sure that the drainage-tube remains in position, and that it is patent, and not obstructed by a clot. Retention of pus thus caused is a serious matter in a case of simple empyema, since a continuous and full discharge of the secretion is a necessary condition of a speedy cure. For the same reason, it is held advisable to change the second dressing after a short interval. The thermometer is a sure indicator of retention of pus, but not until this has been established for some hours. During each change of dressing, which, as has been stated, is always done in Dr. Wagner's practice under the spray, the drainage-tube should be removed and thoroughly cleansed, and, if necessary, be shortened before it is replaced. If, during the after-treatment of a primarily simple case of empyema, the pus become fetid and mixed with flakes and shreds of fibrine, the pleural cavity at each change of dressing must be washed out with an antiseptic solution. Dr. Wagner recommends a solution (three to eight per cent.) of boracic acid, or a five per cent. solution of chloride of zinc.

Careful observation of temperature is of the highest importance during the after-treatment of empyema. In a case of simple empyema, the temperature, after an antiseptically performed operation, should from the first be almost normal, unless there be any disease of the lungs or other viscera. An evening temperature of over 101 deg. should always arouse a suspicion that the pus does not flow freely, or that it is no longer in a good condition. A persistence of fever may be caused also by the presence within the pleural sac of fibrinous masses, and, in such case, steps should at once be taken to remove these. In many cases of empyema, these masses exist in abundance, and set up fever by acting as foreign bodies and by becoming decomposed. When the purulent fluid discharged at the time of operation is found to contain fibrinous flakes, and the walls of the cavity can be felt to be roughened and covered by similar deposits, the case can only be treated as one of simple empyema, and an attempt must be made to remove all the material. A portion of rib should be resected, in order that the opening in the thoracic wall may be of sufficient size, and the surgeon should then attempt to remove as much as he is able of these fibrinous masses, by introducing his finger and by washing out the cavity. The injected fluid should be an antiseptic one sufficiently concentrated to disinfect, as far as may be possible, any remaining deposits. The use of such injections should be continued until the purulent discharge becomes free from smell, and is no longer mixed with portions of fibrinous material. The further treatment of complicated empyema, so long as the pus is in good condition, is the same as that of simple empyema.

Dr. Wagner warns against replacing too soon during the after-treatment a thick and short drainage-tube by one of smaller calibre. A weak and narrow tube will more readily become obstructed, and offers less resistance to the tendency of the ribs immediately above and below the wound to come together and obstruct the flow of pus. When there has been no secretion for about eight days, and the temperature has remained during this period quite normal, the drainage-tube may be removed. The wound generally heals then very rapidly. If in cases of this kind there occur a reaccumulation of pus, the abscess is usually a small one, and its sac is cut off from the pleural cavity. If the discharge do not cease very soon, it would be advisable, Dr. Wagner states, to brush over its lining membrane a strong solution of chloride of zinc. No injection should be made into this abscess, as the recent adhesions might readily be broken down. W. Johnson Smith.

RINGER ON THE INFLUENCE OF ANÆSTHETICS ON THE HEART:

AND ON THE ANTAGONISM OF POISONS.

Dr. Ringer has recently published two papers (*Practitioner*, June and July, 1881) which throw considerable light on the action of anæsthetics on the heart; and incidentally on the vexed question of antagonism. The observations were made with Roy's

apparatus, a description of which will be found in Dr. Roy's paper 'On the Influences which Modify the Work of the Heart (*Jour. of Physiol.*, vol. i, p. 452). Considerable difficulties have hitherto been experienced in working this apparatus, arising chiefly from the inconvenience of having to obtain fresh blood for each experiment.

Dr. Ringer finds that the desiccated defibrinated bullock's blood, imported by Parke, Davis, and Co., of Detroit, Michigan, answers the purpose admirably. It can be readily obtained, as it is frequently used for enemata, in cases of gastric ulcer, etc. For physiological purposes it is dissolved in distilled water, and then diluted with saline, one part of blood-mixture being used to two of salt solution. In each experiment three ounces were used, the same blood being employed in the same series of observations, so that the poison and its antidote were intermixed.

Chloroform acts powerfully on the ventricle of the frog's heart. Like lactic acid, muscarin, and jaborandi, it lessens both the height and duration of the trace until, finally, the heart is arrested in diastole. In one experiment, a minim of chloroform nearly stopped the ventricle; and, when the heart had almost ceased beating, the addition of two ten-minim doses of strong solution of ammonia at once restored its action, until the contractions became almost as powerful as at first. The addition of ten drops of chloroform again stopped the heart. This shows the powerful paralysing effect of chloroform, and demonstrates most conclusively the mutual antagonism existing between chloroform and ammonia.

It is clear that chloroform does not arrest the ventricle by stimulating the inhibitory apparatus, for the portion of the heart employed contains no inhibitory nerves. Chloroform clearly paralyses the muscular substance of the heart, for it is well known that the muscular tissue will beat rhythmically without the presence of nervous ganglia. It is evident, therefore, that, did the chloroform paralyse only the ganglia of the ventricle, the ventricle itself would still continue to beat. Further experiments made with the lower half only of the ventricle render this certain, the ganglionless and nerveless portion being affected in exactly the same way as the whole ventricle.

Atropia does not antagonise the action of chloroform on the ventricle; nor will the previous addition of atropia prevent the action of the chloroform. Ethidene dichloride affects the ventricle in exactly the same way as chloroform. Ether affects the heart in a far less degree than either chloroform or ethidene dichloride. Large doses accelerate the heart's action, and make each beat a little weaker; but the amount of work done is considerably greater, the increased frequency more than compensating for the diminished force of each contraction. Ammonia and ether, like chloroform and ammonia, are mutually antagonistic as regards the whole ventricle. Bromide of ethyl arrests the ventricle, acting on the muscular substance. It is far less powerful than chloroform, but more poisonous than ether.

Iodoform and ammonia are mutually antagonistic, as shown by their action on the ventricle. A fifth of a grain of iodoform nearly stopped the heart, and then ten minims of a one per cent. solution of strong ammonia restored the contractions, which were again arrested by another dose of iodoform. This was repeated on the same heart three successive times.

The importance of these observations cannot be over-estimated, throwing as they do a new light on the whole subject of antagonisms. Rossbach (Pfluger's *Archiv*, Band xxi, Heft 1, p. 1, 1879) contends that drugs are never mutually antagonistic. He maintains that, when a tissue is paralysed by one poison, it is impossible to stimulate it by another. For instance, whilst atropia, he says, antagonises pilocarpine, pilocarpine cannot antagonise atropia; atropia paralyses the sweat-apparatus, and pilocarpine is no longer able to stimulate it into action. He admits that after small doses of atropia pilocarpine can produce sweating, and this he explains by assuming that atropia paralyses first the nerve of the sweat-gland, and later the gland-apparatus itself. After a small dose of atropia the nerve only is paralysed, and then the pilocarpine can still stimulate the glandular cells; but a large dose of atropia paralyses the cells also, and then pilocarpine is powerless.

Dr. Ringer's recent experiments demonstrate the fallacy of this argument. The lower half of the ventricle consists of only one substance, muscular tissue, so that the antagonism cannot be due to an action on different structures.

William Murrell, M.D.

LEUF ON FRACTURES OF THE HUMERUS AT THE ELBOW.

In a paper on 'Additional Factors concerned in Fractures of the Humerus in the vicinity of the Elbow-joint' (*Annals of Anatomy and Surg.*, July 1881) Dr. A. H. Leuf of Brooklyn, New York, points out what he believes to be an important function subserved by the supinator longus and extensor carpi radialis longior muscles in these injuries. The supinator longus muscle, Dr. Leuf states, not only rotates the radius outwards after this bone has been rotated inwards, but it is also a flexor of the fore-arm upon the arm, and, moreover, has a strong tendency to perform lateral abduction of the fore-arm and increase its ulnar deflection. The actions of the extensor carpi radialis longior are essentially the same as those of the supinator longus, but less in degree, and, in addition to its actions in common with its supinator fellow, it extends the wrist. The performance of lateral abduction of the fore-arm by these two muscles is principally prevented by the muscular and ligamentous structures at the inner side of the elbow-joint, but the two abductors are assisted by the structures at the outer side of the joint, namely, the supinator brevis, the anconeus, and the other extensors. The pronator teres, when it contracts in the unfractured arm, not only pronates the hand, but tends also to produce flexion of the fore-arm on the arm. This same muscle, when the internal condyle, or the coronoid process, or both together, are fractured, draws the internal condyle, or coronoid process, or both, as the case may be, downwards and outwards.

In a fracture of the external condyle, the capitellum and external epicondyle being separated from the shaft of the bone, the group of extensor muscles attached to the external condyle tends to drag the external condyle downwards, but really does not do so, but simply turns it outwards in the cup-shaped cavity of the head of the radius which prevents downward displacement. The anconeus tends to rotate the external condyle backwards and

inwards, and also downwards. The supinator brevis draws the fragment downwards and forwards, and so partly antagonises the anconeus. The fibres of these two muscles crossing each other almost at right angles, when acting together, tend, like the extensors, to rotate the external condyle outwards. The pronator teres and the flexors arising from the inner condyle tend to adduct the fore-arm.

As to treatment of fracture of the external condyle, the most rational way to meet the above noted indications are, according to Dr. Leuf, as follows. 'Make full extension at the elbow and digital articulations, and keep the hand on a line with the fore-arm. This position relaxes the triceps, the anconeus, and the extensors attached to the external condyle. The position of the fore-arm, midway between pronation and supination, relieves the supinator brevis and pronator teres, thus lessening the tendency of the latter to separation of the outer articular surfaces of the elbow-joint by adduction of the fore-arm. Any tendency in the flexors, or in the pronator teres, to adduct the fore-arm is, in this extended condition of the upper limb at the elbow, wrist, and digital articulations, overcome by the action of the two adductors, aided by that of the extensors. The triceps and brachialis anticus have no effect whatever on a fractured external condyle, directly or indirectly, so long as the fore-arm is freely extended.'

Dr. Leuf considers in the second place fracture of the internal condyle—that is, separation of the trochlea and internal condyle from the shaft of the humerus. The flexor muscles and the pronator teres attached to this condyle tend, it is stated, to draw it downwards and inwards. This tendency causes simply a rotation, forwards, downwards, and inwards. The muscle acting most directly and most powerfully to produce the downward and forward displacement is the pronator, while the flexors are strongest in the effort at displacement downwards and inwards. The anconeus and supinator brevis tend to assist the abductors, and to draw the fore-arm upwards and outwards. It seems to Dr. Leuf that the treatment of fracture of the internal condyle is to extend all the joints from the elbow downwards, and to completely supinate, so as to make tense all the muscles attached to this condyle, thus causing them to keep the fragments down far enough to preserve a good ulnar deflection. The action of the brachialis, which tends to carry upwards the internal condyle, is overcome by that of the biceps, and the two adductors and the extensors also act in preventing this separation. The abductive power being much greater than the adductive power, it may seem that a superabduction would take place. Were all the muscles here involved equally irritated, then this would be the case. But the brachialis anticus is the only one directly irritated by the fragment, and consequently it is vigorously active in its attempts to force the troublesome condyle out of the way.

In fracture of both condyles, in order to obviate shortening of the injured arm and lateral separation of the fragments, Dr. Leuf recommends continuous extension and counter-extension. This may be done in the same way as in the lower extremity, *i.e.*, by means of the weight and pulley. A bandage should be passed around the lower end of the arm, so as to adduct it. The weight should be so adjusted as to adduct the fore-arm.

Dr. Leuf thus sums up the practical conclusions to be drawn from his observations. 'In fractures involving the elbow-joint, place the patient's arm on a pillow fully extended, and midway between pronation and supination, if the external condyle is the one fractured: if it is the internal condyle, then complete supination of the fore-arm, in addition to full extension (avoiding carpal over-extension) should be made. If both are involved, the treatment should be the same as if it were a fracture of only the internal condyle, with extension added. Passive motion should not be commenced until the danger of moving the fragments is over; previous to this the patient will move the arm sufficiently to prevent much articular rigidity. As time goes on and pain lessens, the good effects of rest accumulate, and the patient will move his joint freely. By keeping the parts at rest, the amount of callus will be less; consequently there will be less danger of implication of the musculo-spinal nerve, or its branches, or the ulnar, as they pass, the first in front, the second behind the elbow-joint.' W. Johnson Smith.

DR. DUDGEON'S SPHYGMOGRAPH.

A new sphygmograph has lately been introduced by Dr. Dudgeon. Its author claims for it many advantages; that it is small, portable, inexpensive, and easily adjusted, as it requires no wrist-rest; also that it is accurate in its registration of pressure, and gives a tracing always of the same amplitude, namely, fifty times that of the actual pulse-wave. In the mechanical movement of the smoked paper, and in the horizontal instead of vertical action of the pen, Dr. Dudgeon's sphygmograph resembles Pond's, but it differs from it, by the impulse being conveyed by means of a delicate steel spring, instead of through the tense diaphragm of a drum; the adjustments also are much simpler, and are less likely to become disarranged. It has, moreover, the advantage of being capable of being carried in the pocket, and easily adjusted.

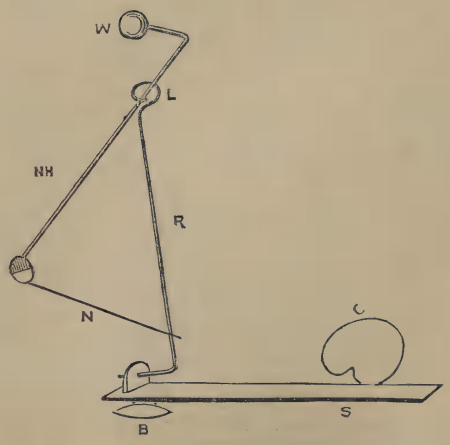

Fig. 1.—Principal parts of Dr. Dudgeon's sphymograph, diagrammatically drawn.

Fig. 1 is a diagrammatic drawing of the principal parts of the instrument. To the horizontal spring, S, is attached an oblique rod, R, which slopes backwards at an angle of about 10 deg., and ends above in a loop, L. Through this loop passes a second metal rod, N H, in contact with the first, and sloping away

in the opposite direction at an angle of about 20 deg. This rod is supported above by being inserted into a horizontal metal bar (not figured), beyond which it is bent backwards at an angle less than 90 deg., and at the end of this short limb is attached a ball or counter-weight, W, which, if allowed full play, would swing the rod as many degrees one side of an imaginary vertical line passing through the point of suspension as it is now held to the other by the loop at the top of the rod R. Below the metal spring, at the spot where it is placed over the pulse, there is a metal biconvex button, B, loosely attached to the spring by two minute screws. When pressure is put on the spring by the revolution of the concentric, C, the edges of this button are lodged on the projecting borders of the framework of the instrument, an arrangement which may be advantageous or not, according to circumstances; it renders the registration of pressure more accurate; but in cases where the pulse is deeply placed it is a disadvantage, as it makes it impossible to bring the button down on the artery. Now, it will be readily understood that, the metal spring being raised by the pressure of the pulse, the oblique rod, R, tends to assume a vertical position; in doing so it releases its hold over the suspended, or what we may call the needle rod, N H, which therefore swings forward, carrying the needle with it, thus producing the up or percussion stroke of a tracing on the smoked paper, which is moved along beneath the needle at a very regular speed. On the pressure being removed the spring descends, and the oblique rod is brought back again to its sloping position, and in so doing it pulls the needle rod back with it.

Ingenious as is the construction of the little instrument, and much as its compactness and neatness recommend it for the needs of the clinical physician, it is yet wanting in that minute accuracy, in that exquisite rendering of delicate waves of motion, which alone can make sphygmographic tracings of clinical or scientific value. 1. There is a loss of mobility in transmitting the movements of the pulse-wave from one solid rod to the other, placed at an angle to each other. 2. There is a loss of power in overcoming the resistance of the needle to the carbonised paper on which it rests its whole weight. 3. There is a loss of time at the end of the up-stroke, in converting the movement forwards by means of the counter-weight at the end of the needle-rod, into a movement backwards by the action of one rod on the other. These mechanical defects translate themselves by the oblique feeble up-stroke, the rounded tops, and the ill-defined marking of the tidal and dicrotic waves of all the tracings taken with this instrument.

In order to test the capabilities of the instrument, I took tracings with it to compare with tracings taken at the same time, and from the same pulses, with Mahomed's modification of Marey's sphygmograph. The persons were in average good health, and the cases were taken at random. The tracings are figured below.

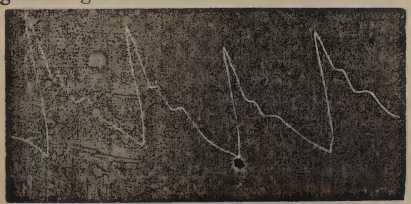

Fig. 2.—Tracing of A's pulse with Mahomed's sphygmograph. Pressure 2½ oz.

Fig. 3.—Tracing of A's pulse with Dudgeon's sphygmograph. Pressure 3 oz.

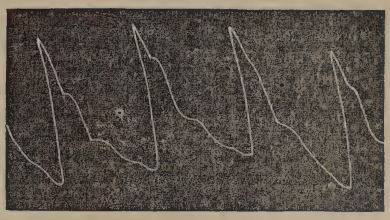

Fig. 4.—Tracing of B's pulse with Mahomed's sphygmograph. Pressure 3 oz.

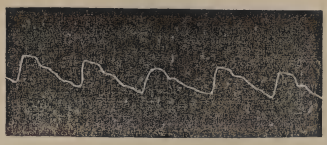

Fig. 5.—Tracing of B's pulse with Dudgeon's sphygmograph. Pressure 5 oz.

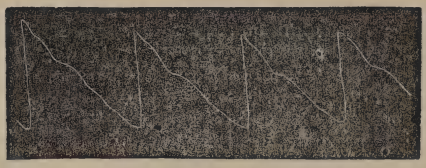

Fig. 6.—Tracing of C's pulse with Mahomed's sphygmograph. Pressure 1 oz.

Fig. 7.—Tracing of C's pulse with Dudgeon's sphygmograph. Pressure 2 oz.

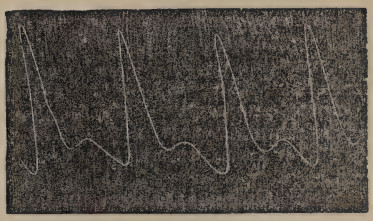

Fig. 8.—Tracing of D's pulse with Dudgeon's sphygmograph. Pressure 4½ oz.

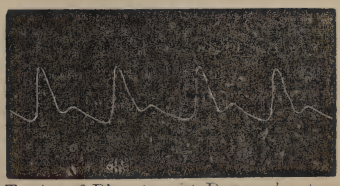

Fig. 9.—Tracing of D's pulse with Dudgeon's sphygmograph. Pressure 2½ oz.

The tracings taken with Dr. Dudgeon's sphygmograph, compared with those taken with Mahomed's, are illustrative of the errors pointed out above, in the former instrument. The normal pulses of A, B, and C, appear, when rendered graphically by

Dudgeon's sphygmograph, as those of extreme tension, and it will be observed that in each case an increased pressure was found necessary. In D's case, the pulse-wave was one of great amplitude; with the pressure of two ounces the pen was, in Marey's sphygmograph, thrown far beyond the inch-wide paper, and the pressure of four and a half ounces had to be put on to diminish the force of the percussion-stroke. The impulse and the dicrotic wave being exaggerated in this case, they were appreciated by Dudgeon's sphygmograph at a less pressure, though the rounded top but ill interprets the elastic condition of the artery. The loss of mobility in the transmission of the pulse-waves is shown in Fig. 3, in which tracing the well-marked tidal and aortic waves of A's pulse are merely indicated; the loss of power, by the oblique direction and feebleness of the up-strokes; and the loss of time, the most important of all the errors, by the rounded tops of the tracings, caused by the instantaneous arrest of the needle whilst the motor impulse is being transmitted from one rod to the other, and, probably, also by the friction of the needle leaning its own weight on the smoked paper. Nevertheless, though the instrument has in it inherent faults of construction, Dr. Dudgeon has made one step towards making sphygmography a daily clinical practice, by producing so compact, small, and inexpensive an instrument.

Alice M. Hart.

EXNER ON THE LOCALISATION OF FUNCTIONS IN THE HUMAN CORTEX CEREBRI.

A contribution on this subject was read by Dr. Exner before the Vienna Medical Society, on May 13 (*Wien. Med. Woch.*, 1881, No. 21). From several thousand cases in medical literature, Exner had collected 168 of pure lesion of the cortex cerebri, in which there were good histories of the patients and of the *post mortem* examinations. According to the necropsies, the seat of the disease was marked on plaster casts, with colours chosen to denote the morbid symptoms observed; thus facial paralysis was marked yellow, red denoted disturbance in the motor power of the upper extremity, etc. This collection was then methodically prepared. The negative cases were first investigated on diagrams showing the four principal views of the cerebral hemisphere; all those parts of the cortex which in all cases of the collection appeared injured, and by the lesion of which the function which was to be examined had not suffered, were marked down. In this way the cerebral surface was covered with drawings of cerebral lesions; that spot only remaining white which bore reference to the function in question.

By this method of percentages, Exner divided the cerebral surface into 380 arbitrary squares; each square was numbered, and then, in order to discover the importance of any portion of the brain for any function, it was determined: 1, In how many cases this square had been the seat of a disease; 2, In how many cases the disease of this square was contemporary with the interruption of the function under investigation. The results of this method were represented graphically, so that every square received a tint which corresponded to the percentage found. If lesion of a square, the functional disturbance which was to be examined, had taken place in all cases, this square was marked black; if only in one case, the square remained white.

The third method was to inquire which parts of the cerebral surface were diseased when a certain function appeared to be disturbed. This method is most of all subject to deception.

Exner now examined what parts of the cerebral cortex were altogether susceptible of lesion without functional disturbance, and found that this was the case chiefly with the frontal and the temporal lobes. Yet in this a remarkable difference between the two hemispheres was discovered. Since the right hemisphere provides for the left half of the body, and *vice versâ*, it was naturally expected that the cortical regions belonging to the right hand, which is much more expert than the left, would be more extensive. And, in fact, it was found that altogether the left hemisphere is much more cultivated with regard to motion than the right. In the left hemisphere the two central convolutions, the whole of the parietal and occipital lobes, have proved to be localities which must not be injured if the lesion is to pass without disturbing motion and motor power, while in the right hemisphere the two central convolutions alone represent these exceptional places. Therefore, supposing a disease to be limited to one hemisphere, the probability of its course being latent may be represented in the right hemisphere by 3, and in the left by 2. The cortical field for the upper extremity in the right hemisphere is situated in the upper part of the two central convolutions and in the paracentral lobule; while that in the left hemisphere extends considerably further backwards. That part of the cortex which has in all cases produced the same symptom is marked by Exner as the absolute cortical field of the respective function, and that which only in certain cases produces the symptom, he calls the relative cortical field. The cortical field for the upper extremity is very probably to be placed at a point in front of the fissure of Sylvius, in the lower part of which is to be sought the most intense portion of the cortical field, especially for the movements of the thumb. For the lower extremities, the portion of the cerebral cortex is smaller on the right hemisphere than on the left; and in the right hemisphere the main share falls to both central convolutions and to the paracentral lobule, while in the left hemisphere the corresponding cortical field extends as far backwards as the occipital lobe.

The relative cortical field of the lower extremity is just as large as that of the upper; although the absolute cortical field of the upper extremity is larger than that of the lower. The excess of extent which the cortical fields of the right hemisphere have over those of the left, is always found to be in a direction backwards, so that the cortical fields for the left extremities are much nearer the occipital lobe than those for the right, where they remain nearer the central convolutions. The cortical fields for the various functions varying in susceptibility of being affected, slight diseases will already have caused a disturbance in the region of the upper extremities before they reach the lower; there are slight lesions which cause complete paralysis of an upper extremity without greatly influencing the lower. This indicates that small lesions are not best adapted for the study of the localisation of the functions of the cerebral cortex. With this corresponds the fact, that the absolute cortical fields are surrounded by a grey zone of the relative cortical fields, so that it appears probable that the power of any cortical portion which is of high importance for a certain function, will, as regards this function, decrease gradually in all directions. To prove this, Exner made an examina-

tion of one particular function, at the same time excluding from his percentage calculation all those lesions which encroached on the absolute cortical field; whereby it was found that even in this case there was a gradual decrease of power of the cortical field, from the absolute cortical field towards the circumference, in the direction of the limits of the cerebral convexity. Diseases seated in the absolute cortical field will always produce far more intense symptoms than those in the relative cortical field.

Exner then turns to the cortical field for the facial nerve. He says that, as a rule, all muscles which in ordinary life are innervated simultaneously, are represented together in the cerebral cortex, whether they be provided for by the same nerve or not. Since we are able to move the right extremity independently of the left, this is innervated by the left hemisphere only; yet we cannot innervate the external rectus of one side without also innervating the internal rectus of the other. These two muscles are provided with nerves by each of the hemispheres, therefore disease of both hemispheres will cause deviation of both eyes to one side. Our voluntary movements, as regards looking, do not intend a turning of both eyes to the right, but only purpose to catch sight of objects on our right side; and therefore we turn the head together with the eye; and hence the muscles of the neck, together with those that turn with the eye to the right, are represented together in the corresponding part of the brain. Deviation of both eyes and of the head to one side is very frequent in lesions of one hemisphere. If it were merely accidental that, when both eyes deviate, the head also deviates to the same side, the calculus of probability would show that no fewer than 20,000 cases would be required to produce that number of deviations of the eye and the head together, which Exner has found in his collection of 168 cases.

As regards speech, Exner remarks that there is no absolute cortical field. The seat of word-deafness must be placed in the second temporal convolution. Amnestic and atactic aphasia is confined chiefly to the second frontal convolution. The centre of speech is situated in the left hemisphere only, that one which is the more cultivated in regard to motion. It is but natural that the movements of articulation should be directed by one hemisphere only. Speech would be considerably disturbed if, for instance, in pronouncing the letter 'j' (English 'y' in 'you') one corner of the mouth should be raised one-tenth of a second later than the other.

Exner then speaks of the cortical fields for the sense of sight, and of those for the tactile sensations, and finally remarks that he considers it a puerile conception, to imagine a single small portion of the body to have no other destination than to serve, as it were, as a handle for the soul in order to innervate a certain group of muscles. It is plain that the conditions at the cerebral cortex are much more complicated, and the corresponding cerebral portion where fibres enter certainly serves for a good many other purposes besides innervation.

DE LA HARPE ON ACUTE PULMONARY ŒDEMA.

Dr. De La Harpe (*Revue Méd. de la Suisse*) calls attention to this serious and rare accident, which appears to be little recognised. The observations which he publishes on the subject are incomplete, inasmuch as the examination of the urine was not made, and it probably contained albumen. But whether the cases were examples of albuminuric œdema or not, the facts do not the less present real interest. The first patient, aged 43, went out in cold and wet weather, and had scarcely gone a few steps, when she uttered a cry, and fell, seized with mortal suffocation. She died a very few instants afterwards. In her last moments, it was observed that there was easy and short respiration, accompanied with *râles*. It seemed that bubbling thick foam filled all the respiratory passages; moreover, foam of pure white colour, like eggs beaten into froth, escaped from the nostril and mouth. An examination made some days before, had shown that neither the lung nor the heart presented any appreciable lesion. Another patient, strong and robust, had already on different occasions been seized during the night with suffocation, which occurred unexpectedly, and without known cause. One evening he went to bed in perfect health. He was scarcely asleep, when he awoke with a bound, seized with sudden suffocation. He jumped out of bed, traversed the chamber, and seated himself in a chair, with the death-rattle in his throat. A few instants afterwards he was dead. He died with white froth escaping from the nostrils and mouth.

But cases of this kind are not always fatal. Dr. De la Harpe treated on a former occasion a patient who had analogous crises ten or fifteen times without succumbing to them. He went to bed in good health. Towards midnight, or one o'clock in the morning, he was awakened by a sudden depression, accompanied by mortal anguish. In a few minutes, the distress became extreme, and the aspect livid; death appeared imminent. The means employed always ended, however, by producing an improvement in the course of an hour. During all this time respiration consisted of an easy inspiration and a prolonged expiration, during which bubbling was produced throughout the chest, and seemed to fill the trachea. In a word, the patient, who was well a few minutes before, assumed the aspect of a moribund person suffocated by a frothy liquid, which filled the respiratory passages, and against which he struggled with all the energy of which his muscles were capable. The treatment consisted of hot dry applications and internal excitants, such as ether, ammonia, either pure or benzolated, or with aniseed in strong and repeated doses. But in the most violent crises these remedies did not suffice, and several times it was necessary to resort to a method which would seem to be of all means the least opportune—bleeding; nevertheless, it always succeeded, and immediately the crisis terminated by rapid eructations and forcible emissions of almost colourless urine. A crisis of this kind recurred twice or more frequently in the year. The patient was 65 years old when first taken. Towards the end of his life, these crises became frequent and less vigorous, intelligence became obtuse, strength diminished, and finally occurred a slight degree of cachectic, and the patient succumbed with a great deal diminishing of strength. Dr. De la Harpe thinks that in this case also there was acute œdema of the lung; but, as an examination of the urine was not made in these patients, the albuminuric origin of the symptoms may be considered probable.

MOORE ON THE OPIUM QUESTION.

The author's first paper on this subject will be found in the *Indian Med. Gaz.* for Sept. and October last. In the present pamphlet, he reasserts his opinion that the anti-opiumists greatly exaggerate the evil effects of opium; that opium in moderation is not injurious, but is even in some cases beneficial, and that it causes less injury to human beings than does alcohol. As a type of the literature in favour with the opponents of opium eating or smoking, may be mentioned a little work on the *Indo-British Opium Trade and its Effects*, by Theodore Christlieb, Professor of Theology in the University of Bonn. It is evidently written earnestly, by a gentleman of great learning who really believes in the injury which opium is said to inflict; but the statements it contains are so utterly unreliable that it is calculated to do much harm. For example, Dr. Christlieb says, 'The cultivation of opium in Malwa diminished agricultural products to such an extent that, in the neighbouring state of Rajpootana, 1,200,000 human beings died from starvation and the diseases caused thereby; a proof surely that there is more than a possible connection between the ever-recurring famine in India and the cultivation of opium.'

General Moore is enabled from his own personal experience to show the fallacy of this statement. During the first famine year he was Superintendent-General of Dispensaries and Vaccination in Rajpootana, and travelled on horseback nearly 1,500 miles through the famine-stricken tracts. The famine was caused by the almost total failure of the rains, especially throughout the western division of the province. Notwithstanding the charms and offerings of the local rain-makers, the skies remained as brass, and the earth as iron, until the time had passed for the sowing of the crops, and a treble famine of grain, grass, and water, commenced. Then, as their forefathers had done on previous occasions, the people of the west, driving their cattle before them, left the rainless country in three great streams. One division travelled north towards the Punjab, another went south towards Guzerat, but the greater stream went last over the Aravellis, through the comparatively less famine-stricken tracts of Meywar, into the promised land of Malwa; a land, notwithstanding its opium cultivation, overflowing with milk and honey in comparison with Marwar and its sterile plains. The people who thus left Western Rajpootana lived as best they could where they found pasture and water for their cattle, until the rains of 1879 commenced, when they streamed back again to their villages, and, hopeful for the future, prepared the ground and put in the seed for the next rain-crop. But when the crops were half grown a new calamity befell these districts. Locusts, numerous as the sands of the sea, appeared, and, in a few days, not a green thing was left. The growing crops were consumed, and the trees were stripped of their leaves as if subjected to a British winter. The number of the locusts, unless actually seen, can scarcely be imagined; the face of the earth was covered with them. For miles and miles the horse crushed through them at every step, whilst near the hedgerows and other sheltered spots the young were in vast heaps, looking at a distance like huge masses of large wasps. They even invaded the villages, and drove the people from their homes. Then, again, the wretched people emigrated, passing, as before, in three great streams into distant countries. But their flocks and herds were much diminished in numbers; the people, having exhausted their means in the previous year, became daily more and more debilitated. The rainfall, although not excessive, was an average, and the usual fevers, when they occurred, were tenfold more destructive than ordinary, the malaria acting on constitutions deprived of stamina by want and exposure.

Here, then, is certainly sufficient to account for any mortality without reference to opium cultivation. As a matter of fact, opium proved the salvation of many by enabling them to bear up against hardships they could not otherwise have withstood. To a certain extent it supplied the place of food and drink, and averted to some degree a prophylactic influence over the malarious fever which prevailed after the rains of the second year of famine.

[There can be no doubt that the description of the evil effects of opium-eating and opium-smoking have been greatly exaggerated. For a full discussion of the subject, see *Brit. Med. Jour.*, May 15, 1880, and vol. i, 1881, pp. 827, 1025, *et seq.*—*Rep.*]

William Murrell, M.D.

BOTKIN AND ALFAYEF ON CONVALLARIA MAJALIS IN CARDIAC NEUROSIS.

Professor Botkin's *Weekly Clin. Gaz.* (St. Petersburg) contains the following.* On February 3, 1881, at the ambulance of Professor Botkin, a woman applied for medical aid. She was aged 30, of medium size, thin, and anæmic. She complained of constant dyspnœa, palpitation, and pain about the heart, radiating into the left arm, and down, along its internal aspect, into the fingers. Exacerbations of these symptoms took place several times a day, and sometimes in the night. She was unable to work and losing flesh; could sleep but little, and only in a sitting posture. She had suffered for ten months, although she had been constantly treated by physicians. The cause of her illness was unknown to her. Her thorax was normal; breathing superficial, 48. Radial pulse small, 116; whilst the carotids and aorta pulsated violently. Her hands trembled very much. Immediately below the left clavicle there was a very noticeable dulness, which extended along the left parasternal line, and which over the third rib merged completely into the absolute dulness of the cardiac region, the latter extending toward the right as far as the median line. The heart's impulse was vigorous, and in the normal situation. The second heart-sound was more pronounced than normal. The respiratory murmur along the parasternal line was weak and short, but improved after deep breathing. On palpation of the abdomen, the right kidney was discovered to be painful and movable.

Professor Botkin pronounced the case one of neurosis of the cardiac apparatus, taking the form of angina pectoris, and which had already caused a change in the dimensions of the heart; thus its diameter was increased so as to reach the median line, and increase in the size of the left auricle was indicated by the dulness along the left parasternal line. In consequence of the insufficient evacuation of these parts of the heart, there were abnormal blood-supply to the lungs, and dyspnœa. The cardiac neurosis in this case was probably due to reflex influence from the abnormal situation of the right kidney, which not only was irritated itself, but kept up an irritation of the adjacent organs.

* Translated for the *Chicago Medical Review*, by Dr. R. D'Ary.

The patient was ordered to apply clay poultices to the cardiac region, to take two or three warm baths a week, and to wear a special belt to retain the kidney in its proper position. Internally she received: ℞. Camph. monobromate of sulphur, 3j; chloral-hydrate, 3ss; powder of acacia and white sugar, āā 3j. To be made into sixty pills; two to be taken three times a day. On the 10th there was no improvement. Examination showed only slight sensitiveness of one kidney. The patient was now given tincture of convallaria majalis, ten drops four times a day. The baths and belt were continued. On the 17th the patient reported that she obtained relief from the very first doses of the medicine, and now felt well. She could sleep in the recumbent position, had no more palpitation or dyspnœa. Pulse, 80-90; respiration, 22. The parasternal dulness was less marked. Cardiac dulness now extended only as far as the left parasternal line. Pulsation of the aorta was still too violent, but less than before. The heart tones were clear, with slight accentuation of the second sound. When she breathed deeply, there was vesicular murmur, though rather weak, along the parasternal line, where the dulness was. The right kidney was less sensitive. The whole success in this case of rather complicated cardiac neurosis was evidently due to the tincture of convallaria, since the remedies previously employed had no effect. Our usual cardiac remedies—digitalis and adonis vernalis—says Professor Botkin, in the vast majority of cases of cardiac neurosis have no effect whatever, whilst convallaria generally acts like a specific. But in these cases it should be used in the form of an alcoholic tincture, not in infusion.

The *Vratch*, for June 16, also contains an article on Convallaria majalis, by Dr. Alfayef, military surgeon in the Caucasus. The plant grows plentifully there, in the mountains, and has a great reputation among the people as a remedy for intermittent fever. Dr. Alfayef experimented systematically on thirty-eight typical cases of that fever, but with only indifferent success. The plant will therefore never rank among the remedies for this disease, but the experiments are very interesting from the fact that they throw a great deal of light on the mode of action, dose, etc., of this potent remedy, which we here reproduce in short. According to popular precedent, the experiments were made with the flowers only, leaving it an open question whether the therapeutic effect of the root and stem is identical with that of the flower.

The alcoholic tincture was found to be the most convenient as well as the most potent form of the drug. The tincture used was of the strength of four ounces of the flowers to the pint of dilute alcohol. In its mode of action it is very peculiar; when doses of twenty or thirty drop were given, the pulse became slower and less compressible. No unpleasant effects were noticeable, although the quantity of each dose finally increased to half a fluid ounce. The results of these experiments, as concerning the pulse, in substance are expressed by Dr. Alfayef as follows. In small doses (five to ten grains of the powdered flowers, or twenty or thirty drops of the tincture), the remedy invigorates the pulse much more noticeably than in large doses (one drachm of the powder, or one-half fluid ounce of the tincture).

Large doses seem to act simply as regulators of the pulse, no matter what was its preceding state. 'As to the diuretic effects of the remedy, I have observed that, while small doses had a well-marked influence in that direction, this influence was not increased from larger doses. For instance, the following case. Simultaneously with tertian intermittent, a patient was suffering with acute hydræmia, general dropsy, and stasis of blood in the lungs, the pulse being 120, weak. He was ordered to take tincture of convallaria, twenty drops, twice a day. No other remedy was used. In five days his condition was much improved; the pulse became stronger, the breathing freer, the quantity of urine had increased fourfold; but the intermittent showed no symptoms of abatement, the paroxysm being even more severe than before.

'I am, therefore, inclined to think that the convallaria acts as a diuretic only as it stimulates the heart's action, and consequently increases lateral blood-pressure, being similar, in this respect, to digitalis. But its great advantage over digitalis is, that it is quite harmless, even in over-doses.

'I have also tried the convallaria (in small doses) in pneumonia, and once in a case of dropsy from fatty degeneration of the heart, and obtained a retardation of the pulse, and, in the latter case, an increase in the quantity of urine voided. I think it, therefore, likely that the convallaria may with advantage be substituted for digitalis, wherever the latter is indicated.'

KLEIN ON THE ETIOLOGY OF MILIARY TUBERCULOSIS.

Dr. E. Klein (*Practitioner*, Aug. 1881), discusses, with his customary thoroughness and ability, in his recent paper, the evidence, still, however, somewhat incomplete, afforded by modern pathology, which favours the view that miliary tuberculosis (using the term in the sense as defined by Virchow, and altogether distinct from caseous inflammation and scrofula) is a specific infectious disease. This evidence may be conveniently stated under three heads.

1. Evidence shows that miliary tuberculosis is communicable from one human being to another. (*a*). The disease may be inherited, though this is not a distinguishing character of infectious diseases, being associated with certain morbid states distinct from infectious disease, such as cancer or gout, yet, when combined with other features connected with specific disease, it has a certain value, even if an indirect one, more particularly when inheritance is considered in relation to a notoriously infectious disease, syphilis. If the specific infectious character of miliary tuberculosis be admitted, then the so-called special delicacy and vulnerability of the tissues (the only kind of inheritance admitted by some) is simply an accidental and secondary condition, the specific *materies morbi*, or virus of tuberculosis, being the primary or essential thing. Nothing definite is known as to the period of incubation of tuberculosis. (*b*). The disease, again, may be acquired in various ways. It may be communicated from husband to wife, or *vice versâ:* many instances of this kind are on record. Or it may be communicated from patient to attendant, or *vice versâ* (see vol. xi of *Glasgow Med. Jour.*, p. 168). Cohnheim holds that the virus enters the organism most commonly through the air-passages, producing pulmonary or laryngeal tuberculosis; thence it spreads to the bronchial glands and the system at large; or it may enter by the alimentary canal, being swallowed either in food, or in tuberculous sputa, spreading to the mesenteric

glands, peritoneum, etc.; or it may attack the urogenital apparatus, or may pass from the upper nasal cavity through the cribrous lamina of the ethmoid bone to the pia mater.

2. We have evidence that tuberculosis is communicable from man to animals, and from animal to animal, in many well-known series of inoculation experiments. In the case of the rabbit and guinea-pig, however, disseminated tuberculosis occurs after inoculation with non-tubercular as well as with tubercular matter, provided they set up inflammation with caseous products; in other animals, in which inoculation did not produce inflammation with caseous products, no disseminated tuberculosis ensued. In Cohnheim and Salomonsen's experiments, a perfectly fresh piece of tuberculous tissue from the human subject was introduced into the anterior chamber of the eye of a rabbit or guinea-pig; in a short time the first irritation passed off, the bit of tissue diminished gradually in size, and then disappeared; after an incubation-period of three weeks, minute gray tubercles appeared suddenly on the iris, which increased in size and underwent caseation. This result followed only and exclusively after the introduction of real tubercular matter. This experiment also furnishes a test, by means of which real tubercular matter may be distinguished from all other caseous, secondary, and chronic inflammatory products, especially scrofula: the tuberculosis of the iris in rabbits and guinea-pigs is produced by human tubercle, and by nothing else. The inhalation experiments of Tappeiner and of Bertheau gave analogous results; nothing but tuberculous materials produced tuberculosis. There are also on record many observations of the transmission of tuberculosis by feeding.

3. There is to be considered evidence as to the nature of the *materies morbi*. The view that miliary tuberculosis depended on the absorption of matter from a caseous focus was supported mainly by inoculation experiments on rabbits, in which tubercular and non-tubercular matter were equally effective. But it was afterwards proved that, for the production of miliary tubercle of the iris with subsequent general tuberculosis in rabbits, real tubercles (grey or caseous) must be employed. It follows, then, that the *materies morbi* is present in the grey tubercle, and is not present in all and every caseous matter, but only in that derived from real tubercles; as regards bovine tuberculosis, it has been shown that the virus is present also in the blood, milk, flesh, and other tissues, but whether this is the case with regard to human tuberculosis has not yet been proved. It has finally been asserted that human tubercular pus contains minute micrococci; that no result follows inoculation with the clear serum of tubercular pus which had been previously freed from solids; that inoculation of this sediment produces the usual result; and that the aqueous humour of an eye affected with tubercle of the iris is effective as an inoculating fluid, only after these tubercles have begun to undergo caseous degeneration.

KLEBS ON THE BACILLUS OF ENTERIC FEVER.

IN the *Arch. für Exper. Path. und Pharm.*, Band xii, p. 234, Professor Klebs published some preliminary observations on this point, and he now (*Arch für Exper. Path. und Pharm.*, Band xiii, Heft 5, 6) gives a full account of his observations and experiments. Professor Eberth has, meanwhile, published (Virchow's *Archiv*, Band lxxxi, p. 58) views in many points confirmatory of those of Professor Klebs.

Professor Klebs' results may be summarised as follows.

1. The bacillus typhosus occurs constantly in the intestinal infiltrations of enteric patients, as also in those anatomical alterations considered secondary—in the mesenteric glands, for example, the larynx, the lungs, the pia mater, the kidneys. Professor Klebs considers that, in some epidemics, the lungs are by inhalation primarily affected, or that at least the disease in them runs parallel with that in the intestine. In such cases, there is œdema with collapse of lung, mostly in the posterior part of the lower lobe, not dependent on meteorism, because he finds it present when meteorism is entirely absent. Professor Klebs delineates a case of this nature.

2. The bacillus typhosus forms at the height of its development long undivided threads containing spores; but, in its earlier stages, it appears as short rods containing terminally placed spores. The thread-form is found in close mycelia in the tissues, and also in more simple parallel or spiral arrangement in the interior of blood-vessels. The bacillus differs from the organisms of ordinary putrefaction frequently found in the intestinal contents, first in its greater fineness and its appearing as rods and threads; secondly, in the fact that it penetrates the tissues, which the coarser varieties never do.

3. Where the bacillus typhosus collects, the cells of the tissue degenerate and disappear. Sometimes, however, the cells develop rapidly, overcoming the bacillus, and then the bacillus may spread by means of the blood-vessels and so reach the kidneys, pia mater, heart, and lungs, although these last may be primarily affected.

4. Micrococci are developed only in isolated cases, and are simply complications of the bacillary development, being associated with the septic process.

5. From experiments in which he injected subcutaneously in rabbits fluids containing the bacillus typhosus, cultivated with most painstaking precautions, Professor Klebs considers himself justified in the conclusion 'that the bacillus typhosus, under favourable conditions, developes in the mucous membrane of rabbits into the same thread-mycelium as can pervade the whole mass of a typhoid infiltration, and fill the blood-vessels in the human intestine. The histological changes in the two cases correspond, and still further strengthen the conclusion that this organism is the essential cause of the typhoid process.'

With regard to the treatment of enteric fever, Professor Klebs's views are naturally based on the results above enunciated. If enteric fever really depend on the development and migration of an organism, the therapeutic indication is to check the growth of this organism. At the present time, treatment in enteric fever is mainly directed towards a reduction of the temperature. While admitting that repeated cold baths to a certain extent accomplish this, he has found them utterly fail in certain epidemics, and he points out that the interesting cases published by Strube and Fraentzel (*Zeitschr. für Klin. Med.*, Band ii, Heft 2) of severe enteric fever without high temperature, show an exclusive attention to the temperature to be unjustifiable. Antimycotics, when used in the disease, have been regarded as antifebrile; but Immerman, from his

favourable results with salicylic acid, recommends thorough disinfection of those probably infected. The statistics of three epidemics given by Jahn show a lower mortality and shorter average duration of the disease in that treated by salicylic acid or salicylate of soda (℥j to ℥iss daily) than in the other two. Salicylic acid seems to exert no effect on typhoid pneumonia, from which the fatal cases died; but the delirium disappears rapidly, pointing to an accumulation of the remedy in the central nervous system. The fall in temperature is gradual, and at first it may even rise higher, but in that case there are marked remissions. As an antimycotic, Professor Klebs recommends benzoate of magnesia (℥v daily), with inhalations of a five per cent. solution of benzoate of soda, with which he would combine cold compresses for the abdomen, and occasional cold baths. JAMES ANDERSON, M.D.

GARDINER ON FORMULÆ FOR DISGUISING DISAGREEABLE FLAVOURS.

Extensive use is made in America of 'elixirs' in prescribing. Under this name are included a great variety of formulæ for the administration of well-known remedies in such a manner as to render them palatable in flavour, or at least to cover and disguise the disagreeable flavour of different drugs. The use of a single plain elixir for this purpose is inefficient: thus rose, in combination with other flavours, answers admirably for calisaya bark alone, but, if more be added, becomes disgusting to most persons; and it is entirely out of harmony with the chalybeate effect upon the palate. Each particular drug needs, therefore, to be studied with reference to the flavour, or combination of flavours, best adapted to cover its disagreeable features, without in any case interfering either with the therapeutic action or with the chemical compatibility of the mixture. There is always a danger in stereotyping these complicated preparations when the formulæ are not at hand; but the advantages of being able to prescribe, in a form which is positively pleasing to the patient and grateful to the stomach, are not to be undervalued, either in respect to the delicate patient, to young patients, or to the prescriber. In respect to the following formulæ, which have all been largely and practically tested, Mr. R. W. Gardiner says (Martin's *Chemists' and Druggists' Bulletin*, July, 1881):

It will be observed that the elixirs of calisaya bark and combinations are prepared from the purified salts of the alkaloids, and not from cinchona bark direct. The view taken of this subject was that, since cinchona bark contains certain alkaloids in varying proportions, hence, an elixir made from definite proportions of purified alkaloids would be more uniform in composition; that the preparatory extraction of the alkaloids from the bark was a troublesome, and, as usually performed, a very incomplete process, because not carried far enough to purify, and when accomplished gave such varying results, due to difference of alkaloidal yield of different samples of bark, that no two lots of elixir were identical in strength; that the alkaloids represented all the medicinal value of the bark suited to utilisation in elixirs; and, finally, that the round-about process of detainating the crude bark to get at impure alkaloids was not only more expensive, time being considered, but also less satisfactory in every sense than to use the purified salts of the alkaloids in proportions identical with careful essays of best specimens of calisaya bark.

In preparing the several elixirs of pepsine in combination with bismuth, iron, etc., Boudault's pepsine has been found to answer better than that prepared by Scheffer's method, as the latter contains chloride of sodium and free hydrochloric acid, which decompose the bismuth salt.—[Finzelberg's pepsine would probably be found even better for the purpose.]

It is quite possible to prepare pharmaceutically satisfactory elixirs of these combinations, by using the French pepsine, and by bringing the elixir to exact neutrality when finished. Therapeutically, these combinations cannot but prove unsatisfactory, as the soluble salt of bismuth requires alkalinity or neutrality for solution, while the pepsine is only active in the presence of free hydrochloric acid; by compromising these antagonisms upon the basis of neutrality, the two substances may, with intelligent management, be kept in permanent solution—if not unduly exposed to the air—but at the loss of the activity of the pepsine, unless it meets, when taken, a sufficient quantity of this acid in the stomach to render it active, which is not probable.

It has been stated that pepsine in the presence of bismuth is changed so as to be no longer capable of digestive action, even if hydrochloric acid be added. Some experiments, made with a view to ascertain if this be so, seem to show that such change, if it occurs at all, is by means immediate, as the digestion of coagulated albumen was effected by a preparation of bismuth, pepsine and strychnia several months old, upon the addition of hydrochloric acid. I regret that I took no notes of these experiments; but will endeavour to renew them and report results at a future time. In all elixirs containing either the alkaloids or their salts, I have found it indispensable to add a small proportion of citric acid, which must be accurately neutralised upon the completion of the preparation by ammonia, if iron or bismuth salts be present. If the acid be not used, the alkaloids or their salts will deposit or crystallise out of solution upon standing. And if elixirs containing pyrophosphate of iron be left acid, the iron salt deposits. In preparing elixirs containing the alkaloids or their salts, after having made the alcoholic flavoured vehicle (reserving a portion of the alcohol), I put the citric acid in a suitable vessel, and add a sufficient quantity of boiling water. When the acid is dissolved, I add the alkaloids and as much alcohol as I have used of boiling water, and stir until the alkaloids are completely dissolved; I add this to the elixir, rinsing the vessel with it, and stir until well mixed.

I have used phosphate of lime with satisfaction to effect the combination of essential oils, tinctures of resinous substances, etc., in the preparations of the flavouring vehicles for elixirs; as this substance is insoluble, no precipitation of alkaloids, by reaction, is possible. In the elixir of phosphate of iron, quinia, and strychnia, the tribasic ferric phosphate, in combination with citrate of ammonia, is used. It is more stable, and less acted upon by light, than the pyrophosphate. The addition of about twelve per cent. of glycerine to this elixir favours the harmony of its constituents.

Elixir of coca contains a small quantity of caustic soda to develop the peculiar action of this drug.

Elixir or wine of pepsine, when not in combination with other substances, as bismuth, etc., is prepared from saccharated pepsine, and a sufficient ex-

cess of hydrochloric acid is added to insure digestive action.

Wine of beef and combinations are prepared with pyrophosphate of iron instead of ammonio-citrate, as the ferruginous taste is less perceptible, and the salt is in better keeping with the phosphates of beef.

FORMULÆ.

1. *Curaçoa Flavour.*—Tinct. Curaçoa, comp., of 8 fl. oz.; tinct. of fresh orange peel, 16 fl. oz.; orange-flower water, 12 fl. oz.; syrup, 70 fl. oz.; alcohol, 72 fl. oz.; water, 2 pints. Mix.

2. *Tincture of Fresh Orange Peel.*—Outer rind of fresh oranges, 8 oz.; alcohol, q. s.; percolate, 1 pint.

3. *Compound Tincture of Curaçoa.*—Ground curaçao, 24 oz.; ground cloves, 1 oz.; ground canella, 1 oz.; alcohol, q. s.; percolate, 4 pints.

4. *Tincture of Fresh Lemon Peel.*—Outer rind of fresh lemons, 16 oz.; alcohol, q. s.; percolate, 2 pints.

5. *Citro-ammoniacal Solution of Ferric Phosphate.*—Phosphate of soda, 7½ oz.; solution of tersulphate of iron, 7 fl. oz.; citric acid, 2 oz.; aqua ammoniæ U. S. P., 5½ fl. oz., or sufficient to neutralise. Dissolve the phosphate of soda in sufficient water, and decompose with the tersulphate of iron; wash and drain. Combine the acid and ammonia and add sufficient to the phosphate of iron to dissolve under the same conditions as the officinal pyrophosphate. Evaporate by gentle heat to one pint. This solution contains 50 per cent. of the salt.

6. *Solution of Citrate of Ammonia.*—Citric acid, 16 oz.; aqua ammoniæ U. S. P., q. s. to neutralise. Mix.

7. *Citro-sodic Solution of Ferric Chloride.*—Solution of chloride of iron, 3 pints; citric acid, 54 oz. 197 grs.; crystallised carbonate of soda, 100 oz. 5 grs.; water q. s. Dissolve the carbonate and acid in 6 pints of water; mix this solution gradually with the iron solution, and add water to make 12 pints.

8. *Solution of Saccharated Pepsine.*—Saccharated pepsine, 3 oz. 310 grs.; water, 1 pint; hydrochloric acid, C. P., 3½ fl. dr.; glycerin, 4 fl. oz.

9. *Elixir of Ammonio-citrate of Bismuth.*—Ammonio-citrate of bismuth, 2 oz. 64 grs.; oil of orange, 1½ fl. dr.; orange-flower water, 4 fl. oz.; phosphate of lime, q. s.; extract of vanilla, ½ fl. oz.; alcohol, 1½ pints; syrup, 1 pints; water, q. s. Mix, making one gallon.

10. *Elixir of Blackberry-Root.*—Fluid extract of blackberry, 10 fl. oz. 320 min.; tincture of orange-peel, 2 fl. oz.; oil of orange, 15 min.; oil of cassia, oil of anise, oil of coriander, 8 min. each; oil of nutmeg, oil of rose, 4 min. each; extract of vanilla, 2 oz.; phosphate of lime q. s.; syrup, 3 pints 4 oz.; alcohol, 1 pint 12 oz.; water, q. s. Make 1 gallon.

11. *Elixir of Bromide of Calcium.*—Bromide of calcium, 10 oz. 320 grs.; compound elixir of orange, q. s. Make 1 gallon.

12. *Elixir of Bromide of Potassium.*—Bromide of potassium, 10 oz. 320 grs.; compound elixir of orange, q. s. Make 1 gallon.

13. *Elixir of Bromide of Sodium.*—Bromide of sodium, 10 oz. 320 grs.; compound elixir of orange, q. s. Make 1 gallon.

14. *Elixir of Calisaya Bark.*—Tincture of orange-peel, 2 fl. oz.; oil of orange, 15 min.; oil of cassia, oil of anise, oil of coriander, 8 min. each; oil of nutmeg, oil of rose, 4 min. each; extract of vanilla, 2 oz.; syrup, 3 pints 2 oz.; alcohol, 1 pint 15 oz.; citric acid, 20 grs.; sulphate of quinia, 130 grs.; sulphate of cinchonia, 65 grs.; phosphate of lime, q. s.; sugar colouring, 10 min.; water, q. s. Make 1 gallon.

15. *Elixir of Calisaya and Iron.*—Tincture of lemon-peel, 1 fl. oz. 6 dr.; oil of orange, 65 minims; oil of lemon, 30 min.; oil of cloves, oil of cassia, oil of nutmeg, 6 min. each; alcohol, 1 pint 5 oz.; pyrophosphate of iron, 2 oz. 64 grs.; sulphate of quinia, 130 grs.; sulphate of cinchona, 65 grs.; phosphate of lime, q. s.; syrup, 3 pints; citric acid, 25 grs.; aqua ammoniæ, q. s.: glycerine, 1 oz. 6 dr.; water, q. s. Make 1 gallon.

16. *Elixir of Calisaya, Bismuth, and Iron.*—Ammonio-citrate of bismuth, 2 oz. 64 gr.; water q. s. to dissolve; elixir of calisaya and iron, q. s. Make 1 gallon.

17. *Elixir of Calisaya, Iron, Bismuth, and Strychnia.*—Citrate of strychnia, 9 grs.; boiling water, alcohol, ½ oz. each; dissolve, filter, and add: elixir of calisaya, iron, and bismuth, q. s. Make 8 pints, 7 oz.

18. *Elixir of Calisaya, Iron, Pepsine, and Bismuth.*—Pyrophosphate of iron, 2 oz., 64 grs.; boiling water, q. s.; dissolve and add: elixir of pepsine, bismuth, and calisaya, q. s. Make 8 pints.

19. *Elixir of Cinchona, Iron, and Strychnia.*—Citrate of strychnia, $10\frac{6}{25}$ grs.; boiling water, alcohol, ½ oz. each; dissolve, filter, and add: elixir of calisaya and iron q. s. Make 8 pints.

20. *Elixir of Cinchonidia, Iron, and Strychnia.*—Ferric phosphate (citro-ammon.), 2 oz. 64 grs.; sulphate of cinchonidia, 1 oz. 32 grs.; citrate of strychnia, $8\frac{5}{15}$ grs.; citric acid, 20 grs.; tincture of orange-peel, 1½ fl. oz.; extract of vanilla, 1½ fl. oz.; phosphate of lime, q. s.; oil of orange, 60 min.; oil of cassia, oil of anise, oil of coriander, 30 min. each; oil of nutmeg, 10 min.; syrup, 36 fl. oz.; glycerine, 10 fl. oz.; alcohol, 26 fl. oz.; water, q. s. Make 8 pints.

21. *Elixir of Coca Leaves.*—Fluid extract of coca, 21 fl. oz. 160 min.; alcohol, 13 fl. oz.; glycerine, 5 fl. oz., curaçoa flavour, 5 fl. oz.; sherry wine, 8 fl. oz.; solution caustic soda (sp. gr. 1.22), ½ fl. oz.; compound elixir of orange, q. s. Make 8 pints.

[*To be continued.*]

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. WILLIAMS, H. F.— Pilocarpine Muriate in Diphtheria. (Proceedings of the Medical Society of the County of Kings, August 1881.)

2. LEYDEN. — On the Indications for the Administration of Digitalis. (*Deutsche Med. Zeitschr.*, 23, 1881.)

3. ANDERSON, MCCALL. — Cases illustrative of Influence of Nitro-Glycerine in Angina Pectoris, etc. (*Glasgow Med. Jour.*, July 1881.)

4. ROCHESTER, T. M. — Grindelia Robusta as a Remedy in Asthma. (*Ther. Gaz.*, June 1881.)

5. RIOPEL, E. E. — On Pulque. (*Therap. Gaz.*, June 1881.)

6. RIVA.—A Severe Case of Chronic Gastric Catarrh treated by Washing out the Stomach. (*Rivista Ital. di Terapia ed Igiene*, and *Lo Sperimentale*, August.)

7. MOSSO.—Treatment of Neuralgia and Rheumatism by Electricity and Iodoform. (*Gaz. Med. de Termo.* and *Lo Sperimentale*, August.)

8. CIARAMELLI.—Hypodermic Injection of Citrate of Iron. (*Lo Sperimentale*, July.)

9. CURCI.—The Action of Berberin. (*Lo Sperimentale*, August.)

10. PARONA.—The Treatment of Ankylostomum by Ethereal Oil of Male Fern. (*Gaz. delle Clin.*, and *Giorn. Internaz. delle Scienze Med.*)

11. Coltmann, R.—Atropia as an Antidote to Opium. (*Phil. Med. and Surg. Rep.*, June 25.)

12. Stehman, H. B.—Joborandi in Mastitis. (*Ibid.*)

13. Smith, G. K.—A Method of using Electricity in Diphtheria. (*Proceedings of King's County Med. Soc.*, August 1881).

14. Ott, I.—The Active Principle of Jamaica Dogwood. (*Archives of Clin. Med.*)

15. Brakenridge, D.—Action and Use of Citrate of Caffein as a Diuretic. (*Edin. Med. Jour.*, August 1881.)

16. Soltmann.—Treatment of Cholera Infantum by Resorcin. (*Breslauer Aerzth. Zeit.*)

17. Shinn.—Benzoate of Calcium in Albuminuria. (*Phila. Med. Times*, August 1881.)

18. Martin.—Parsley as a Means of Suppressing the Secretion of Milk. (*Bull. Gener. de Therap.*, August 30.)

19. Kaposi.—Beta-naphtol in Skin Diseases. (*Wien. Med. Woch.*, May 28, June 4 and 11, 1881.)

20. Stewart.—Coto-bark in the Sweating of Phthisis. (*Canada Lancet*, July.)

21. Costelli.—The Treatment of Scurvy by Hydrotherapy. (*Rivista Clin. di Bologna*, Jan. 1881.)

22. Wilson.—Sulphurous Acid Injections in Gonorrhœa. (*Lancet*, July 1881, p. 205.)

23. Stowers.—Chrisma as a Parasiticide. (*Brit. Med. Journ.*)

24. Smith.—Olive-oil in the Treatment of Gall-stones. (*Lancet*, August, p. 351.)

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1. *Williams on Pilocarpine Muriate in Diphtheria.*—Dr. Williams (*Proceedings of the Medical Society of the County of Kings*, August 1881) tells us that his attention was drawn to the subject by the publication of a paper by Dr. Geo. Guttmannn of Cronstadt, whose formula he has adopted. It is as follows:—Muriate of pilocarpine, gr. ⅓—⅔; pepsine, gr. 1—1¼; hydrochloric acid, m. iii; distilled water, ℥ ii: a teaspoonful every hour for children. Dr. Williams gives details of ten cases, his series comprising five of diphtheria, three of scarlet fever, with severe throat-complications, one of acute tonsillitis, and one of follicular tonsillitis. The results were apparently satisfactory, the membrane, in the cases of diphtheria, being readily detached.

2. *Leyden on the Indications for the Administration of Digitalis.*—Digitalis may be administered with advantage in acute febrile diseases, in hæmoptysis and other hæmorrhages, and in cardiac affections. It is not very safe as an antipyretic, as there is always danger of sudden collapse. It is difficult, says Professor Leyden (*Deutsch. Med. Zeitsch.*, No. 23, 1881) to lay down definite rules for its administration in cardiac affections, as every case must be judged on its own merits. It is specially indicated in mitral and aortic disease when there is diminished arterial tension, with dyspnœa and scanty secretion of urine. In these cases it is best given in small doses, of from one-quarter to one-fifth of a gramme daily. Should these doses fail, it is quite an open question whether it is advisable to give more. In hypertrophy and dilatation of the left ventricle, with lung-mischief, digitalis is a very uncertain remedy. It is a feeble diuretic, and only succeeds when there is a feebly acting left ventricle. Digitalis is best given in the form of tincture or infusion. Probably, the best substitute for digitalis is squills. It may be given in combination, or, better still, digitalis may be given first, with squill to follow.

3. *Anderson on Nitro-Glycerine in Angina Pectoris.*—The solution of nitro-glycerine employed was the 1 per cent. alcoholic solution. In a case of well-marked angina pectoris, described by Dr. McCall Anderson (*Glasgow Med. Jour.*, July 1881), the doses was gradually increased from a drop three times a day to fifteen drops six times a day. Before the treatment was commenced, the patient could not walk more than three hundred yards without pain, but when he left the hospital, at the expiration of about three weeks' treatment, he could walk at least half a mile at an easy pace on the level without discomfort, and when the pain began to make its appearance, he could put a stop to it at once, and continue walking, by swallowing a dose of ten drops. William Murrell, M.D.

4. *Rochester on Grindelia Robusta as a Remedy in Asthma.*—Dr. Rochester, in a paper recently read before the Medical Society of the County of Kings, Brooklyn, records his experience of the use of grindelia robusta in the treatment of asthma. The author (*Therap. Gaz.*, June 1881) has notes of over sixty cases in which the remedy has been employed, and has given it in as many more, of which he has kept no record. Most of the cases were of long standing, and many of them were dispensary patients, whose hygienic conditions were anything but good, and whose occupations were unfavourable. The grindelia was found to be equally efficacious, whether employed in simple spasmodic asthma, or in bronchial asthma. It may be given either in half drachm doses of the fluid extract every quarter of an hour during the attack, until the paroxysm subsides, or in from fifteen to twenty drop doses in the intervals. Grindelia robusta often proves of great benefit in hay asthma; in one case in particular, it afforded relief after almost every remedy had failed. Dr. Squibb, in commenting on this paper, said that grindelia squamosa was often used as a substitute for grindelia robusta, although very different properties were attributed to the two species. There was reason to believe that the fluid extract was as often made from one species as from the other [Grindelia robusta is undoubtedly a valuable remedy; and succeeds admirably in some cases of asthma, although in others it signally fails. The great difficulty is to get it good, for much of the so-called grindelia sold in this country is not grindelia robusta at all. The liquid extract prepared by Messrs. Parke, Davis, and Co., is a reliable preparation. In a case of asthma, which for the last two years has been under constant observation, it afforded relief after the failure of many remedies, including arsenic, belladonna, ipecacuanha, lobelia, iodide of potassium in half-drachm doses four times a day, citrate of caffeine, jaborandi and pilocarpine, Jamaica dogwood, quebracho and its alkaloid, nitrite of amyl, nitroglycerine, iodide of ethyl, pure terebene, hypodermic injections of atropia and morphia, stramonium and datura tatula, nitre-papers, cubebs, cigarettes, vapo-cresolene, blisters over the pneumogastrics, and liniments, sprays, and inhalations of all kinds.—*Rep.*] Wm. Murrell, M.D.

5. *Riopel on Pulque.*—Pulque, or neutli, is the national drink of the Mexicans. It is produced, says Dr. Riopel (*Therap. Gaz.*, June 1881), by fermentation of the juice, expressed from the central portion of the maguey or Agave Americana. The plant itself has long been supposed to possess medicinal properties, and is reputed to be a diuretic. The juice, after being expressed between rollers, is carried to the vats for fermentation. These vats consist of raw ox hides, suspended in a strong wooden frame with the hair outside. They contain the ferment, the residuum of former fermentations. The liquid thus obtained is alcoholic, and contains fusel oil and car-

bonic acid. It is largely used by the lower classes as an intoxicant, and gives rise to the usual symptoms of alcoholism. [There is nothing new in this; it has been familiar enough to everybody for the last fifty years. Pulque is frequently known as octli or agave wine. The American aloe (*Agave Americana* or *Mexicana*) is of slow growth, and flowers, on an average, only once in ten years. In the plantations, the attendant watches each plant as the time of flowering approaches, and when the central shoot is about to appear he makes a deep cut, and scoops out the whole heart or middle part of the stem, leaving nothing but the outside rind, which forms a natural basin, into which the sap intended for the shoot collects. This fluid has a sweet taste, and is called *aquamiel*, or honey water. It ferments spontaneously, a small quantity of old fermented juice being, however, frequently added to hasten the process. Alcohol is at first produced, as shown by its intoxicating properties, and by yielding an ardent spirit on distillation. In this stage it is sometimes called *mexical*, or *aguardiente de maguey*. An acid is next formed; pulque, as a drink, being said to resemble cider. What the nature of this acid is, is not known. Finally, the almost tasteless juice acquires an intensely fetid odour, resembling that of tainted meat. This is probably due to the production of trimethylamine. It is a noteworthy fact, that many living plants—the bladder-headed saussurea, and the stapelias, for example—exhale putrid odours. The natives of Mexico ascribe many good qualities to their national beverage; it is an excellent stomachic, promotes digestion, induces sleep, and is a sovereign remedy for many diseases. —*Rep.*] WILLIAM MURRELL, M.D.

6. *Riva on Severe Chronic Gastric Catarrh Treated by Washing out the Stomach.*—Professor Riva relates, in the *Rivista Ital. di Terapia ed Igiene*, 1881, the case of a man who had suffered for eleven years from gastric catarrh, the disorder becoming steadily worse, until at last he vomited his food mingled with blood. In this condition, he was admitted into the hospital at Perugia. He was extremely emaciated, and percussion in the epigastrium showed that the stomach was greatly distended. He suffered while in hospital from extreme weakness, sour eructations, intense thirst, anorexia, vomiting (which was more frequent in the morning or at night), and constipation. The vomited matter was of very offensive odour, frothy, and sour: under the microscope it presented digested and undigested fibres of meat, starch-granules, fat-globules, mucus-globules, epithelial cells, and sarcoma. Dr. Riva determined to try the effect of washing out the stomach; and used for the purpose a Nélaton's sound, made rigid by the introduction of a metallic wire; to this was fitted a Kussmaul's pump, and the operation was conducted cautiously, so as not to injure the gastric mucous membrane. The fluid used was a solution of six grammes (93 grains) in 1,000 grammes (about 35 ounces) of water. After two or three operations, the presence of the tube in the stomach did not cause any attempt at vomiting. As this treatment produced only transient improvement, the quantity of bicarbonate of soda was increased to 10 grammes in 1000 of water. The treatment by bicarbonate of soda having been continued ten days without other marked result than cessation of the vomiting, solution of sulphate of copper (5 grammes in 1,000 of water) was injected, and allowed to remain three or four minutes. Under this treatment, the patient rapidly improved, and left the hospital a month after admission, having gained nine kilogrammes (nearly twenty pounds) in weight.

7. *Mosso on the Treatment of Neuralgia and Rheumatism by Electricity and Iodoform.*—Dr. Musso describes, in the *Gaz. Med. di Torino*, 1881, eighteen cases of rheumatism and neuralgia treated by electricity and iodoform. He says that useful effects are often produced by a simple Gaiffe's apparatus, with a weak induced current, in neuralgia and rheumatism. Sometimes, however, the malady does not yield to electricity: and in such cases he has given iodoform internally with success, sometimes alone, sometimes in combination with quinine, salicylate of soda, or bicarbonate of soda. This treatment gave the best result in neuralgia, but was useless in two cases of traumatic sciatica. The daily quantity was from 5 to 6 decigrammes (about 7¾ to 9 grains), besides what was applied externally; and no inconvenience was produced. In one case in which pure iodoform was applied externally, recovery took place, and iodine was detected in the urine. Dr. Musso says that iodoform may be given without fear in doses of from 10 to 15 centigrammes several times a day, external friction and other means of promoting the action of the remedy being employed at the same time.

8. *Ciaramelli on the Hypodermic Injection of Citrate of Iron.*—An abstract of an observation made by Dr. Ciaramelli on the hypodermic injection of iron is given in *Lo Sperimentale* for July. A patient under his care had anæmia of an extreme degree, the affection having lasted several years. For four months, he was treated with good food, exercise, pure air, decoction of cinchona, and preparations of iron, without effect. No iron could be detected in the urine; from which Dr. Ciaramelli concluded that the iron salt did not pass beyond the hepatic circulation, but was eliminated with the bile. He then injected daily from two to three grammes of a solution of one gramme of ammonio-citrate of iron in twenty grammes of distilled water. After thirty days, the rose tint returned to the patient's face, all the symptoms of severe anæmia being at the same time relieved. On chemical analysis, iron was found abundantly in the urine. Dr. Ciaramelli says that this one case is not enough to serve as the foundation of general principles, but it indicates a line of therapeutic research which may be of great practical value.

9. *Curci on the Action of Berberin.*— Berberin has been recommended in Italy as a remedy for enlargement of the spleen consequent on malarial disease; and its mode of action has been carefully studied by Dr. A. Curci, who has made with it a series of experimental, microscopic, and spectroscopic researches. An analysis of his memoir is given in *Lo Sperimentale* for August. He describes first its local and afterwards its general action. The local action of berberin, he says, may be said to consist in irritation and subsequent induration of the tissues. Thus the blood coagulates in the capillaries to which it is applied; the red corpuscles become small, nucleated, granular, and have pale outlines; the muscular fibres lose their distinctness; sometimes the striated fibres become larger and more marked, then lose the transverse striæ, and, the muscular substance coagulating at intervals, special enlargements are produced; the smooth fibres show distinct nuclei and become tortuous. All the tissues are hardened and strongly coloured by berberin; their vital properties are also increased, and there are active proliferation of connective tissue and in-

crease of fibrous tissue. Berberin produces contractions of the intestine, secretion of mucus and of intestinal juices, and tonicity of the tissues. In studying the general effects of berberin, Dr. Curci first tried its effects on healthy animals. In all classes of animals, it produces prostration, muscular relaxation, adynamia, collapse, progressive lowering of temperature, at first increased and afterwards diminished frequency of the heart's action and of respiration, serous diarrhœa, albuminuria, fatty degeneration of the kidneys, and complete anorexia. Hypodermic injections produce these phenomena rapidly, and, if repeated, are followed by death. On the other hand, the administration of berberin by the mouth requires a larger dose for the production of the symptoms; diarrhœa and renal changes are always absent, and death seldom occurs. Towards the end, when sensibility is somewhat diminished, there are tonic and clonic spasms. The temperature is at first lowered, then returns to the normal, and finally falls as death approaches. The vomiting is constant and painful, preceded by contractions; and the vomited matter consists of food and mucus. The abdomen is painful; and the dysentery at last becomes colliquative. The urine is yellow, acid, and albuminous. *Post mortem* examination only shows diastole of the heart and fatty degeneration of the cortical portion, with hyperæmia, of the kidneys. Spectroscopic examination of the blood indicates diminution of its oxidising and nutrient powers. Berberin reduces the temperature, not through the intervention of the vaso-motor nerves, but by its direct action on the tissues, through which action it also indirectly modifies the blood. With regard to the action of berberin on the spleen, Dr. Curci has found that its administration to animals is followed by an enlargement of that organ. Hence he concludes that, in cases where an enlarged spleen has become reduced under the use of berberin, this has not been due to contraction of the capsule of the spleen, but to the destruction of the malarial miasmatic agent, which is atrophied by berberin in the same way as other histological elements. Dr. Curci concludes from his experiments that berberin may be found useful: 1. in microscopy, as a means of colouring tissues and rendering them resistant; 2. in the treatment of atonic gastro-intestinal catarrh, of chronic dysentery, of wounds and ulcers (in which it does not cause suppuration, and stimulates the activity of the tissues), and of chronic conjunctivitis. Its action on the splenic enlargement of malaria is doubtful, and requires to be studied; and it would appear to be an excellent antipyretic, and to be a remedy against the decomposition of hæmoglobin.

10. *Parona on the Treatment of Ankylostomum by Ethereal Extract of Male Fern.*—Dr. Parona (*Gazzetta delle Cliniche, and Giornale Internaz. delle Scienze Med.*, No. 4, 1881) describes nine cases of ankylostomum duodenale, affecting workmen in the St. Gothard tunnel, which were treated successfully by the ethereal extract of male fern. The mode of administration was as follows. The bowels having been emptied by purgatives, the patient was placed for one day on a diet of broth, milk, and a little wine. Next day, ten grammes of the extract, suspended in 100 grammes of fennel water with ten parts of gum-arabic, were given in one dose, or, if the stomach did not tolerate it, in two doses with an interval of one hour. This dose was repeated three or four days, until the expulsion of all the parasites was complete. The dose sometimes amounted to thirty grammes. Slight gastric and intestinal disturbances were sometimes observed, but very soon passed off; and the alvine evacuations usually contained a certain quantity of mucus, which, however, readily disappeared. The administration of the remedy was sometimes followed by cerebral, cardiac, and pulmonary symptoms; probably, in Dr. Parona's opinion, secondary results of the gastric disturbance.

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11. *Coltman on Atropia as an Antidote to Opium.*—Dr. Robert Coltman (*Philadelphia Med. and Surg. Rep.*, June 25, 1881), gives an interesting case in evidence of the power of atropia to counteract the toxic properties of opium. The patient took an ounce of opium on June 2nd, and was found with pupils contracted to the size of the smallest pinhead, breathing stertorous, pulse slow, but of good volume, and quite incapable of being aroused. Emesis could not be produced on account of the torpid condition of the brain, and hypodermic injections of atropia were resorted to, with rapid and permanent improvement from the first. Flagellation, exercising the patient, strong coffee, etc., were not neglected, but the principal treatment was belladonna internally and atropia hypodermically, and to these Dr. Coltman attributes his ability to dismiss his patient as cured on the third day, especially since the system was not relieved of the opium by vomiting.

12. *Stehman on Jaborandi in Mastitis.*—Dr. H. B. Stehman, in the Lancaster Medical Society's Transactions, April 1881 (*Philadelphia Med and Surg. Rep.*, June 25, 1881), records remarkable results from the use of jaborandi in the treatment of mammary inflammation. There had been an abscess in the inflamed breast at a previous lactation, and now, six days after confinement, the breast was hard and swollen, and severely painful, and the patient suffered from pain in the head and back, and considerable fever. A poultice of two parts of flax-seed meal and one part of crushed jaborandi leaves, applied for twenty-four hours, caused the pain to disappear and the breast to become flaccid at the end of the second day; the milk flowed freely, and the mother nursed her child from it as easily as from the other breast. No milk was drawn during treatment, and the only other treatment was a diaphoretic mixture. Having used the same treatment in a number of similar cases since, Dr. Stehman says he has never seen it fail if used before suppuration had begun.

13. *Smith on a Method of Using Electricity in Diphtheria.*—Dr. G. K. Smith (*Proceedings of Kings' County Med. Soc.*, Aug. 1881) states that he has employed electricity with great advantage in diphtheria. His method is this. He places the feet of the patient in a bath of water as hot as it can be borne with comfort, and he puts in that water one, two, or three tablespoonfuls of saleratus. He then takes a glass of cold water and put some saleratus in it, and with this solution wets the electrode which is to be applied to the throat. The negative pole of the battery is put into the bath in which the feet are placed. The positive is to be covered with cotton and used in the throat, on the tongue, and in the nose if it be needed there. Of course the sponge-handles or ordinary electrodes cannot be used in these localities; but a very convenient one for the mouth and throat is made by covering the blade of a dinner knife with a thin layer of cotton, which is to be soaked with the solution of saleratus. The cotton also serves to keep the soft parts of the mouth and throat from direct contact with the metal, which otherwise would cause pain. The mouth should be kept open, so that the

teeth will not touch the electrode. A convenient electrode for the nose is made by winding a thin layer of cotton on a wire. Thus prepared, the patient is seated in a chair, if able to sit up. The feet are placed in the bath, and the patient holds in his lap a basin to catch the saliva as it flows from the mouth, or as he has occasion to spit it out. The physician should be careful not to sit in front of the patient, for fear that the patient will cough and blow his poisonous secretions in his face. Dr. Smith remarks that two of the members of the society have died from getting in the mouth the secretions of patients on whom they had performed the operation of tracheotomy. Sitting near the right side of the patient, he dips the electrode into the saleratus water to wet the cotton; then placing it on the tongue, he holds the knife by its metallic handle in the left hand, while he lays the right hand very gently on the sponge of the positive electrode. The current will now pass through the operator, and he can regulate the power of the current to the ability of the patient to bear it without pain. If he wants a stronger current, he can grasp the sponge a little tighter. As soon as the patient becomes accustomed to the current on the tongue, the operator may pass it (the electrode) gently up to the side of either tonsil. Watching a good opportunity, he can now pass it back to the posterior wall of the pharynx, and even down to the epiglottis. This last position is likely to make the patient cough, and will, in some instances, make him vomit. In either case, mucus in large quantities will be thrown out, and it will become necessary to remove the electrode; but before this is done, the current should be broken by raising the right hand from the sponge electrode. The cotton on the electrode should be secured by winding a little thread around it, and the operator should be careful not to let the electrode touch the teeth, as that will cause pain. If the current passing through the operator be too weak, he may bring the positive sponge up and touch the handle of the knife. The electrode must be removed occasionally, to give the patient a chance to breathe, to spit, etc. It is not necessary to use a strong current. The electrode for the nose can often be passed back as far as the posterior wall of the pharynx.

14. *Ott on the Active Principle of Jamaica Dogwood—its Physiological Action.* — This has been worked out by Dr. Isaac Ott (*Arch. Clin. Med.*) who arrives at the following conclusions. 1. Piscidia is a narcotic. 2. It does not paralyse or excite the motor nerves. 3. It does not act on the extremities of the sensory nerves, but on their central connection—the sensory ganglia of the spinal cord. 4. It produces convulsions, partly by stimulation of the spinal cord, and partly by heightened excitability of the voluntary striated muscles. 5. It reduces the frequency of the pulse by an action on the heart itself, probably on its muscular structure. 6. The arterial tension temporarily rises by stimulation of the monarchical vaso-motor centre; it soon falls, due to a partial paralysis of this centre and the heart itself. 7. It at first contracts and then dilates the pupil.

15. *Brakenridge on the Action and Use of Citrate of Caffein as a Diuretic.*— Dr. David Brakenridge (*Edin. Med. Jour.*, August 1881) makes the following remarks respecting the action of citrate of caffein as a diuretic. 1. It fails to produce any increase in the amount of the urine in cases in which the renal epithelial cells are diseased —as, *e.g.*, in the early stages of desquamative nephritis —even when vascular and saline diuretics produce a considerable increase. 2. It fails to do so in cases of cardiac dropsy in which, from physiological conditions, we may conclude that the glandular epithelial cells are already doing a maximum amount of work, or are exhausted by transference of work to them from the filtering apparatus. 3. When it acts as a diuretic it increases not only the amount of water passed, but also the amount of urea very markedly, if it have previously been abnormally lowered. 4. Its action is strikingly complementary of that of digitalis; so that, in cases in which both given alone have failed, the two administered together, according to the view suggested, have produced very striking diuretic results. 5. This increase in the amount of the urine may be independent of any increase in the general arterial blood-pressure, sufficient to account for it on any theory of general or local blood-pressure. 6. The combination of digitalis with citrate of caffein causes a striking rise in the amount and percentage of urea, which cannot be explained on any filtration hypothesis. How citrate of caffein stimulates the renal glandular epithelial cells, is still a matter of conjecture. Probably its action is similar to that of jaborandi or pilocarpin on the salivary and sweat glands. In a future paper he hopes to show that the latter substances have a diuretic action like that of caffein. On the other hand, caffein has been observed in exceptional cases to cause both sweating and salivation. From the foregoing considerations and his whole experience of this drug, Dr. Brakenridge deduces the following practical conclusions regarding the employment of citrate of caffein as a diuretic. 1. In cases in which the renal glandular epithelium is diseased, is already doing a maximum amount of work, or is exhausted, this drug is unsuitable and should not be administered. 2. During recovery from acute desquamative nephritis, when renewal of the renal epithelium has reached a certain point, citrate of caffein, cautiously administered, has appeared to him to have had a decidedly beneficial effect; possibly in such cases it may exert a trophic as well as a secretory stimulant influence. 3. In cases in which the arterial blood-pressure is tolerably normal, citrate of caffein should be given alone, not in combination with a vascular diuretic. 4. In cases of cardiac disease, with absence of compensation, and resulting diminution in the blood-pressure and flow of blood through the kidney, general dropsy, and transference of work in the kidney from the filtering to the secreting structures, a vascular diuretic, such as digitalis, must be employed in the first place to restore those conditions in the kidney which are essential to the action of citrate of caffein. For this purpose digitalis should be administered for a short period, one to three or four days, before commencing the citrate of caffein. 5. Citrate of caffein, employed in this manner, in conjunction with digitalis, which, for obvious reasons, must not be discontinued when the caffein is commenced, is a diuretic of extraordinary power, acts with great rapidity, and is especially valuable in this respect, that it causes a great increase in the elimination of urea (and probably of other solids) as well as of water. 6. It must, however, be remembered that special and powerful stimulation of any gland, especially if it be in a state of malnutrition, may, and usually does, lead, sooner or later, to exhaustion, and must, therefore, be regarded as at best a temporary expedient and of limited duration. 7. For this reason very large doses of citrate of caffein should be avoided. He has found three grains administered once, twice,

or three times daily, according to the circumstances of the cases, amply sufficient for all purposes. 8. Whenever the beneficial effects of the drug have been attained, we should at once endeavour to render them permanent by suitable diet, well selected chalybeate and other tonic remedies, or other remedial measures indicated by the special circumstances of the case. 9. Finally, in cases of very great ascites, in which the blood-pressure in, and the flow of urine through, the kidneys is interfered with by pressure on the kidney and the renal artery and vein, and in which the pressure of the urine within the capsules is increased by pressure on the ureters, neither vascular nor secretory diuretics, alone or combined, can act efficiently until the pressure of the ascitic fluid has been got rid of. 10. The citrate of caffein may be administered either in pill or in solution.

16. *Soltmann on Treatment of Cholera Infantum by Resorcin.*—Soltmann (*Breslauer Aerztl. Zeitschr.*) uses resorcin, in doses of 10 to 30 centigrammes (1 to 4.5 grains), in 60 grammes (2.1 ounces) of infusion of chamomile, for children a few months old. Its action is marked within two days, but a cure is obtained, on an average, in six days. Resorcin is a benzine, odourless, white, and crystallised, and has the same antiseptic properties as the phenols and carbolic acid. Ninety-one children were treated with it at the Breslau polyclinic (free dispensary), with very happy results. In collapse, excitant treatment (such as subcutaneous injections of ether) were also used. The following results are said to be produced by it. 1. Ordinarily, the vomiting ceases in a short time, after small doses. 2. The symptoms of collapse diminish. 3. The stools become less frequent. 4. Resorcin, like carbolic acid, is an antiferment, but it is not irritating, and produces no symptoms of intoxication in medicinal doses, like the latter. 5. Patients take it willingly, and it is tolerated by the stomach; under its influence, the digestive tube quickly recovers its function of assimilation which it had lost.

17. *Shinn on Benzoate of Calcium in Albuminuria.*—Dr. A. H. Shinn (*Phil. Med. Times*, p. 747, Aug. 1881) recommends benzoate of calcium as an efficient aid in controlling the albuminuria of pregnancy, as well as a valuable remedy in Bright's disease from other sources. Dr. Shinn has produced a very beautiful crystalline salt of the calcium benzoate, consisting of exquisite translucent, colourless, acicular crystals, soluble in about the proportion of twenty grains to the fluid ounce of water; and of this, the dose he has adopted is, in marked cases, ten grains dissolved in a tablespoonful of fluid, consisting of water with enough orange syrup to flavour it, to be administered every two or three hours during the day.

18. *Martin on Parsley as a Means of Suppressing the Secretion of Milk.*—M. S. Martin reports (*Bull. Gén. de Thérap.*, Aug. 30), that, if the breasts of a nursing woman be covered with parsley leaves freshly pulled, the application being renewed several times a day, as quickly as the leaves fade, the milk will cease to appear. This is an application which may be used when it is impossible to give purgatives or other remedies internally.

19. *Kaposi on Beta-Naphthol in Skin-Diseases.*—Professor Kaposi of Vienna gives, in the *Wiener Med. Woch.*, May 28th, June 4th and 11th, 1881, an interesting account of experiments conducted with beta-naphthol, usually called simply naphthol ($C_{10}H_8O$), and manufactured specially for medical use by Messrs. Kunheim and Co. of Berlin. The beta-naphthol is a dark violet-brown crystalline mass, which breaks easily into powdered fragments. It has a weak phenol-like, but sweetish, odour. A particle placed on the tongue causes acute burning, similar to that caused by Spanish pepper. A drop of a weak solution of carbonate of potash will, however, soon remove this. Naphthol dissolves in equal weights of alcohol, only with difficulty in water, but easily in diluted spirit of wine. If to an alcoholic solution of naphthol a little water be added, a cloud will immediately form, which disappears on shaking, when the water added does not exceed half the volume of alcohol. Naphthol dissolves freely in fixed oils and fats. A diluted alcoholic solution and a salve are, therefore, the only means of applying naphthol. Care must be taken not to make them too strong. Professor Kaposi reports the successful treatment of 106 cases of skin-disease of very various character. In cases of scabies he prescribed as follows: Naphthol, 15 parts; adeps, 100 parts; sapo viridis, 50 parts; creta alba, 10 parts: to be applied twice a day.

20. *Stewart on Coto-Bark in the Sweating of Phthisis.*—In the July number of the *Canada Lancet*, Dr. J. Stewart of Brucefield, Ontario, recommends coto-bark very highly for this purpose, having made the observation while using the agent to control the diarrhœa in a case of phthisis a year ago. Since that time he has used it in twenty-two cases of night-sweating, with beneficial results in all but two of them, and in sixteen cases the arrest of the sweating was prompt and long-continued. In one of the two cases of failure, atropine proved efficacious after long-continued use. In the other, atropine, strychnia, and oxide of zinc all failed.

21. *Costelli on the Treatment of Scurvy by Hydrotherapy.*—Dr. Costelli (*Rivista Clinica di Bologna*, Jan. 1881; and *Jour. des Sciences Méd. de Louvain*, April 1881, p. 184), after having become convinced of the almost complete inutility of all the most approved remedies for scurvy, determined to try hydrotherapy, a means which may be considered as quite original in this malady. Twenty-eight patients were treated in this manner at the military hospital of Bologna from 1873 to 1877, and fifty in 1878. Amongst the latter, seventeen cases showed the gravest symptoms, with difficulty or impossibility of standing upright; thirteen could scarcely rise and walk, with the help of a stick, to the hydrotherapic room; others, although affected to a smaller extent, might be reckoned among serious scorbutic cases. All were cured in a period of thirty-seven days; the time would have been less for a certain number of them, but they were attacked with a periodical fever, notwithstanding which, they were cured by the continuation of the same treatment. Before beginning the application of the cold water, the operator was very careful to ascertain that the patients had no fever or acute or subacute thoracic or abdominal inflammation, and especially that they were free from any cardiac affection. In certain cases, a slight amount of dropsy, arthritis, subacute polyarthritis, and arthralgia, were not considered as counter-indications. The treatment was very carefully conducted, great attention being paid to the various effects obtained; sometimes the shower-bath was used, sometimes the circular spray-bath, which is the most powerful, and, in certain cases, the full douche. As to the pathogeny of the disease, neither the humoral nor the solidest theories satisfied Dr. Costelli, who, after studying its etiology and semeiology, and especially

the results of his method, concludes that scurvy depends on atony of the vaso-motor or trophic nerves, invading, by preference, the mucous membranes and the substance of the muscles, and presenting hæmorrhagic tendencies in relation with the complex conditions of debility.

22. *Wilson on Sulphurous Acid Injections in Gonorrhœa.*—Mr. W. D. Wilson has found (*Lancet*, July 1881, p. 205) sulphurous acid injections unfailing in their curative action in cases of gonorrhœa. One part of the acid, with fifteen of water, injected twice a day, is the only treatment. Six days was the average time in which sixteen soldiers returned to duty, after employing this mode of treatment.

23. *Stowers on Chrisma as a Parasiticide.*—Dr. J. H. Stowers, in reply to Mr. Crane's eulogy upon this agent, a notice of which is to be found in the August number of the London Medical Record, states his experience of vaseline, which he had hopefully employed in similar cases, but which entirely failed to cure or relieve a single case; and he gravely questions whether Mr. Crane's assertions of the value of chrisma can be sustained.

24. *Smith on the Use of Olive-Oil in the Treatment of Gall-Stone.*—In the *Lancet*, August 1881, p. 351, Dr. R. Shingleton Smith explains the rationale of this mode of treatment, showing, by a most instructive case, its fallacy and inefficiency. A medical man, between sixty and seventy years of age, subject to attacks of biliary colic for several years, took six ounces of salad-oil within the space of one hour. Next morning an enema brought away fæces of almost stony hardness, and hundreds of green masses of all shapes and sizes, from a canary-seed to a good-sized horse-bean. Chemical examination proved that these bodies were (1) totally different from ordinary gall-stones, and (2) that olive-oil formed their chief composition; and therefore it may be safely inferred that they were intestinal concretions resulting from the administration of the oil, and that they had not been discharged from the gall-bladder. Another and more severe attack came on subsequently to taking the oil, and eventually a gall-stone passed, with relief to all the symptoms. [Dr. Roderick Kennedy, in the *Lancet*, September 1880, p. 456, drew attention to the use of olive-oil in the treatment of gall-stone, a treatment judiciously criticised by Mr. James Ball, at page 522. In the London Medical Record, 1881, p. 100, there is also a case reported as successfully (?) treated by the same agent.—*Rep.*] R. Neale, M.D.

MEDICINE.

RECENT PAPERS.

1. Mickle.—Rapid Death following Hæmorrhage into the Pons Varolii and Medulla Oblongata. (*Brit. Med. Jour.*, July 1881, p. 151.)
2. Mott.—Case of Typhoid Fever complicated with Diphtheria. (*Brit. Med. Jour.*, July 1881, p. 161.)
3. Porcher.—Metallic Tinkling. (*Virginia Med. Monthly*, Oct. 1881.)
4. Goss.—Membranous Enteritis. (*Boston Med. and Surg. Jour.*, June 2, 1881.)
5. Sturges.—Cardiac Symptoms of Chorea. (*Brain*, July 1881.)
6. Langenbuch, C.—Nerve-Stretching in Diseases of the Spinal Cord. (*Berl. Klin. Woch.*, Nos. 24, 25, 26, 27.)
7. Lachmann.—A Case of Idiopathic Progressive Anæmia. (*Berl. Klin. Woch.*, Feb. 21.)

1. *Mickle on Rapid Death following Hæmorrhage into the Pons Varolii and Medulla Oblongata.*—Dr. W. Julius Mickle reports an interesting case, in the *Brit. Med. Jour.*, July 1881, p. 151, in which a man, aged 39, convalescent from an attack of pulmonary congestion, whilst sitting up in bed, and quite in his ordinary condition of health, suddenly vomited heavily, turned livid, falling back in bed perfectly insensible. Death took place within seven or eight minutes. On a *post mortem* examination, the pons Varolii was found slightly ruptured in front, and ploughed up and pulpified internally by blood, and was, for the most part, occupied by blood-clot and clot mingled with nerve-substance. The upper and posterior part of the medulla oblongata was also invaded. The case is reported for its medico-legal bearings. Death from intracranial hæmorrhage is rarely sudden, and at the most only moderately rapid. In this case, it occurred with extreme rapidity.

2. *Mott on a Case of Typhoid Fever complicated with Diphtheria.*—Mr. F. W. Mott reports, in the *Brit. Med. Jour.*, July 1881, p. 161, a case under the care of Dr. Roberts in University College Hospital, in which a lad, aged 16, during a typical attack of typhoid fever, developed in the third week all the symptoms of diphtheria, dying on the third day of the attack. Mr. Mott concludes his paper with an instructive *résumé* of similar cases. [Some valuable editorial remarks on the co-extense of typhoid and diphtheria may be found in the *Lancet*, June 1881, p. 1037. Other interesting papers may be consulted, vide *Lancet*, Aug. 1878, p. 180; the *Brit. Med. Jour.*, Jan. 1879, pp. 163, 190.—*Rep.*] R. Neale, M.D.

3. *Porcher on Metallic Tinkling.* — Professor Porcher, of Charlestown, says that he has heard unmistakable metallic tinkling in but three cases in seventeen years' hospital practice, with constant practice and teaching of auscultation (*Virginia Med. Monthly*, May 1881). He has made a recent necropsy with the following result. The lung was enveloped in a stratum of air, pneumothorax existing from an old pleuritic effusion which had been absorbed. One border of the upper lobe was fastened to the wall at a point within corresponding to the nipple, necessitating the use of a knife in removal. The lung was consequently suspended in air and in a state of tension, and the chest-wall acted as a sounding board. Within the lung, extending from the apex four or five inches downwards, was a large cavity, with several strings stretching across it at different intervals, with a considerable collection of mucus. Thus the inspired air resounded against the tense walls of the cavity, the connecting bridles and the fluid serving as elements in the production of the sounds heard in auscultation.

4. *Goss on Membranous Enteritis.*—Dr. Francis W. Goss describes (*Boston Med. and Surg. Jour.*, June 2, 1881) four cases of this affection, which is characterised by the discharge from the bowels of what appear to be membranes or skins, of varying size, in the form of shreds, strips, or tubes. This peculiar discharge is accompanied with uneasiness and discomfort, if not with actual pain. The malady is of long duration, the patients, during the weeks or months while suffering from the discharge, being invalids, often confined to the bed or house. They seldom so far recover as to be in robust health, and, sooner or later, are subjected to recurrences of the trouble, with the accompanying physical weakness and suffering. The patients are usually persons

who have not enjoyed good health, but have for years suffered from headache, dyspepsia, constipation, and general debility. They are easily fatigued. Care or over-anxiety often precedes, and seems to bring on, an attack. Rarely is there a single one, but there are commonly recurrences at intervals of months or years. The period of suffering may extend over many weeks, and during this time there are frequent discharges of the membrane-like substance, even several times a day. The paroxysms are commonly preceded by a febrile condition, nervousness, uneasiness in the stomach, and, sometimes, by nausea and vomiting. Abdominal pain and tenderness are not usually very marked, nor limited to any particular region, and the discharge is followed in some cases by a sense of relief. In the intervals between the recurrences of the attacks, the patients are rarely restored to vigorous health. The diagnosis can readily be established by a consideration of the clinical symptoms with an examination of the discharge. Such an investigation will eliminate intestinal worms, fragments of hydatids, intestinal diphtheria, dysentery, or the discharge of a portion of the bowel. Da Costa urges the importance of inquiring, in cases of anomalous nervous symptoms, particularly when happening in hysterical persons where there is abdominal pain, into the possible existence of the malady under discussion. The prognosis is rather unpromising for a complete recovery. The treatment during the paroxysm, or when one is threatening, resolves itself into putting the patient in the condition most favorable to mitigate or endure the attending discomfort. Many and varied, according to all authorities, have been the medicines employed to prevent the recurrence of the malady, but their results for the most part have been disappointing.

5. *Sturges on the Cardiac Symptoms of Chorea.*—Dr. O. Sturges (*Brain*, July 1881) summarises the several factors of the heart-symptoms, thus. 1. In the course of the chorea of childhood the heart's action is apt to become irregular or uneven, and its first sound to be followed by apex-murmur, which is variable in pitch, influenced by posture, seldom audible in the axilla or at the angle of the scapula, and which disappears along with, or shortly after, the chorea, the heart and the circulation suffering no injury. 2. This liability on the part of the heart to what, from its signs, would seem to be a functional disturbance, is independent of the violence or method of the chorea, but dependent upon the age of the patient, the younger children being the most, and the elder the least, liable, while beyond childhood there is little if any liability of the kind. 3. These heart-signs of chorea—acute rheumatism being excluded—give rise, as a general rule, to no symptoms whatever affecting the health or comfort of the child. They make no apparent difference to the prospects of recovery, or to the structural integrity of the heart. Nevertheless, choreic children having this murmur, and happening to die, either with or shortly after recovery from chorea, very commonly exhibit a beading of recent lymph on the mitral valve. Such, he says, are the chief statements which statistics seem to warrant. To these he adds another, which, so far as he knows, has never been statistically reckoned, but which no one will gainsay. It is, indeed, the most constant of all the heart symptoms of chorea, and met with at a later age than the rest. He refers to the acceleration of the heart and pulse.

6. *Langenbuch on Nerve-Stretching in Diseases of the Spinal Cord.*—Dr. Carl Langenbuch has published, in Nos. 24, 25, 26, and 27 of the *Berl. Klin. Woch.*, his further experiences of the results of nerve-stretching in tabes and other diseases of the spinal cord. He shows that, on account of the long course of tabes, the later stages alone are seen in the *post mortem* room, and he also points out that in this disease there are lesions of nerves, as well as of the cord. Sometimes congestion of the nerves, sometimes anæmia, is found. In answer to the question, 'Why are the posterior root-zones affected?' he answers that these are the media of communication between centre and periphery, and may be regarded as practically peripheral substance. The columns of Goll connect grey centres with one another, and are only secondarily affected. He regards cold as the great cause of tabes dorsalis. With regard to the treatment of this and similar diseases, the author observes that even the most useful means—baths, electricity, cautery, etc.—produce only small benefit occasionally; much improvement rarely; recovery never. Such methods act on the end-organs, and thence affect the centres. Nerve-stretching acts directly on the centre; and, although brought forward with caution, it has been abundantly successful. If necrosis of nervous elements have set in, the cure is only partial; but if the disease be taken early, the recovery is complete. Of 28 patients, 16 suffered from tabes, 2 from multiple sclerosis, 1 from lateral sclerosis of both sides, 1 from lateral sclerosis of one side, 1 from muscular atrophy, 2 from tetanus, 3 from spinal myelo-meningitis, 1 from pemphigus, and 1 from pruritus. Six of the tabetic patients were dismissed as cured; the others were recent, and were still in bed when the paper was published. The multiple sclerosis was much relieved in both cases. The one-sided lateral sclerosis was entirely cured, and the bilateral case was too recent to be set down in the list of recoveries. The case of muscular atrophy was considerably improved, but was only recently operated on. The tremors were much diminished, but sufficient time had not elapsed for certainty to be attained. Two cases of myelo-meningitis had only just been treated, and the effect was uncertain: in the third there was little, if any, improvement. Both cases of tetanus died; and, lastly, the case of pemphigus and that of pruritus were both entirely cured. During the operation, both pulse and respiration undergo considerable but varying changes, and when much alteration was observed, further stretching was not allowed. After the influence of the anæsthetic had passed off, the patients had no uneasiness, and expressed themselves, in certain cases, as grateful for the removal of pain. Sensibility was never diminished, but sometimes increased, and there was total removal of the feeling of cold in the extremities. In some cases the one leg felt as if longer than the other, and there was a sensation of being in a strange position. Motility was rapidly restored, and the ataxy removed. Constipation ceased, and involuntary micturition was cured in some cases; and in one case impotence was brought to an end. The sight was improved in cases where it had been affected. The after-results of longer periods have necessarily not been observed as yet; but we have sufficient evidence to lead us to hope for much. Dr. Langenbuch shows that nerve-stretching has an influence upon the whole nervous system, and in conclusion points out that, in disease of the spinal cord, nerve-stretching is a method of treatment from which, under antiseptic management, nothing is to be feared, and everything may be gained.

G. A. Gibson, M.D.

7. *Lachmann on a Case of Idiopathic Progressive Anæmia.*—Dr. Lachmann relates the following case in the *Berl. Klin. Woch.*, Feb. 21, 1881. A young joiner, aged 19, after journeying by deeply snowed roads, suffered from a discharge from the left ear, and severe right-sided headache. On arriving at Frankfort, he was arrested for begging. During the seventeen days' detention he complained of illness, and was twice examined, but nothing important found. On his discharge, he was very weak, and could travel only very slowly. After six days, he reached Giessen, and was immediately admitted into hospital. On admission, his temperature was 40 deg. Cent. (104 deg. Fahr.); his blood, which, owing to the prevailing epidemic of relapsing fever, was examined microscopically, showed no changes. He was a strongly built man, fairly well nourished, colour of skin normal. There was otitis media. The thoracic and abdominal organs were healthy, with the exception of tenderness over the abdomen, which was retracted. He complained of headache and a sense of weariness in the legs. Severe diarrhœa followed an enema given for constipation, but was arrested by moderate doses of opium. This was followed by retention of urine, which was relieved by catheterism. The urine contained a trace of albumen on one or two occasions. The pyrexia meanwhile continued; there was a slight jaundice, lasting only one day; and a rough systolic murmur, loudest over the sternum, developed. The patient became very pale in colour, was apathetic, suffered from vertigo when sat up in bed, and a whitish-yellow exudation and hæmorrhages were observed in the retina. The pallor increased, the inguinal glands became slightly swollen, and there was tenderness over the sternum. There was no enlargement of the spleen. The murmur became audible at the apex and in the arteries, and a continuous rushing sound was heard over the veins of the neck. The optic discs became a little indistinct at the upper, lower, and inner margins, with fresh hæmorrhages and exudation in the retinæ. Next a tumour, varying in size and shape, rapidly formed in the abdomen, and could be felt *per rectum*. This was followed by slight swelling of the left leg. The temperature, which had been of a remitting type, now began to fall, and the patient to improve; the tumour diminished in size, and, in a few days, disappeared, followed by subsidence of the swelling of leg. The temperature became normal, the hæmorrhages disappeared from the retina, and the margins of the discs became more distinct. The patient gained flesh, his colour returned to his cheeks, and he was discharged well ten weeks after his admission. The treatment was fluid nourishment; at first, hydrochloric acid, followed by quinine, fifteen grains in the twenty-four hours; and the continued administration of dialysed iron. The enumeration of the blood-corpuscles at different times gave the following results.

	No. of red corpuscles.	No. of white corpuscles.	Proportion of white to red.
Feb. 26	1,000,000	40,000	1 to 25
March 1	1,250,000	17,500	1 to 70
,, 6	2,000,000	10,000	1 to 200
,, 10	2,100,000	2,500	1 to 840
,, 15	3,000,000	5,000	1 to 600
April 10	4,800,000	7,000	1 to 685

When first examined, the formation of the red corpuscles in rouleaux was quite absent, but became present as the corpuscles increased in number. Some of the red corpuscles were very small and round, some were nucleated, some presented amæboid movements. The white corpuscles were large and small, similar to lymphatic and splenic corpuscles. The author carefully reviews the case, considering, and excluding from the diagnosis, relapsing fever, enteric fever, and acute and ulcerating endocarditis. [Unfortunately it is not stated whether the murmur persisted or disappeared.] He then points out that, though many of the symptoms would be explained by a myelogenous leuchæmia, the persistent high temperature and course of the disease were opposed to this diagnosis. He concludes that the case was one of progressive pernicious anæmia, which, in the absence of any discoverable etiological condition, must be regarded as 'primary or essential'. The rapid and complete recovery he hesitates to ascribe to the treatment employed. The abdominal tumour, which so rapidly formed and disappeared, he regards as due to a large hæmorrhage, and this he conjectures to have caused by pressure thrombosis of the iliac vein. [The author of this carefully observed and fully detailed case is probably correct in his conclusion, though the case is in many ways exceptionable. It will be found that, with increasing knowledge on the subject, cases which must provisionally be placed under the head of idiopathic or pernicious anæmia, present considerable differences, though agreeing in marked alterations of blood. The absence of obvious visceral disease (otherwise than consecutive to the anæmia), and the correspondence between the patient's condition and the richness of the blood in corpuscles show that anæmia was an essential peculiarity of the disease, though on what that anæmia depended, as in most of such cases, is uncertain. The rapid course of the disease is most remarkable. A certain degree of leuchæmia is sometimes associated with the diminution of coloured corpuscles at the commencement or close of cases of pernicious anæmia; and, intimately associated as are the development of white and red corpuscles, leuchæmia and anæmia sometimes pass the one into the other.—*Rep.*]

Stephen Mackenzie, M.D.

SURGERY.

RECENT PAPERS.

1. Sée, Marc.—The Use of the Vulcanised India-rubber Bandage. (*Soc. de Chir. de Paris.*)

2. Vance, R. A.—On Lithotrity. (*Annals of Anat. and Surg.*, July 1881.)

3. Gaujot, G.—The Treatment of Floating Bodies in the Knee. (*Rev. de Chir.*, No. 5 and 6, 1881.)

4. Tillaux.—The Tarso-Metatarsal Joints with regard to Lisfranc's Operation. (*Bull. et Mém. de le Société de Chirurgie*, No. 4, 1881.)

5. Bruns.—On Transplantation of Marrow. (*Archiv für Klin. Chir.*, Band xxvi, Heft 3.)

6. Charcot.—Effusions of Blood at the Fold of the Elbow. (*Revue de Chir.*, Sept. 10, 1881.)

7. Menard.—Forcible Straining of Genu Valgum. (*Revue de Chir.*, Sept. 10, 1881.)

8. Coates.—A New Method of Operating on Internal Piles. (*Brit. Med. Jour.*, August 1881, p. 350.)

9. Cheyne.—Retropharyngeal Abscess opened from the Outside of the Neck. (*Med. Times and Gaz.*, August 1881, p. 254.)

10. Coombs.—A New Method of Treating Subcutaneous Nævi. (*Lancet*, August 1881, p. 374.)

11. Bryant.—Warren's Radical Cure for Hernia. (*Lancet*, August 1881, p. 374.)

1. *Sée on the Use of the Vulcanised Rubber Bandage.*—In a paper communicated to the Société de Chirurgie of Paris, on June 29th, M. Marc Sée states that he has for many years made use of the vulcanised rubber bandage in the treatment of the following surgical affections: 1. Œdematous infiltration of limbs, from whatever cause: whether from heart-disease, affection of the liver, cachexia of any kind, pressure of an abdominal tumour, etc. In any of these instances, the elastic bandage properly applied prevents too considerable distension of the skin, as well as the development of the erysipelatous redness which frequently follows any partial mortification of the integument. The bandage is particularly efficacious in cases of the troublesome infiltration of the upper limb that often occurs in women suffering from cancer of the breast, with extension of the disease to the axillary glands. It is equally useful in the treatment of œdema persisting after the cure of phlebitis, lymphangitis, etc. 2. Sero-plastic infiltrations following diffuse phlegmon, which result in stiffness of joints and impairment of motion arising from a rigid condition of the skin and subcutaneous cellular tissue. Frictions and shampooing, so useful in cases of this kind, will find their efficacy much promoted by the use of the elastic bandage during the intervals of the sittings. The stiffness due to swelling of the fingers following phlegmon of the hand and forearm may be successfully dealt with by the same means. 3. Infiltrations and effusions of blood after contusions, subcutaneous lacerations, and ecchymoses of every kind. The rubber bandage favours and hastens the absorption of the extravasated blood by acting on it in the same way that the thumb of the surgeon acts when crushing a blood-swelling of the hairy scalp, save only that it works gently, without violence, and in a continuous manner. 4. Serous effusions into joints and, especially, hydrarthrosis of the knee, the elbow, and the ankle; affections that are often rebellious to other plans of treatment, or which return as soon as the patient begins to walk or to use in some other way the affected limb, as is often seen in cases of gonorrhœal arthritis. In many instances of this kind, M. Sée has attained good cures in the course of a few days by the use of the elastic bandage, and even after prolonged rest and the application of the actual cautery had proved ineffectual. 5. Phlegmonous inflammation, whether circumscribed or diffuse, at any period of its evolution. Wherever it is applicable, the rubber bandage in cases of this affection is an useful substitute for the poultice, over which it has the advantage of being capable of moderating the afflux of blood by compressing the tissues. 6. Ecthyma of the surfaces of limbs, and the ulceration remaining after the separation of the crusts; also atonic ulcers of the lower limbs, callous ulcers, varicose ulcers. In all these affections, the elastic bandage causes a rapid disappearance of all complications, and favours cicatrisation. 7. The elastic bandage is very useful in the dressing of recent wounds, whether due to accidental injury or to surgical operation. When fixed over a Lister's dressing it favours immediate union, and permits a prolonged retention of such application. M. Sée has occasionally, after having allowed the dressing to remain for three weeks, found the wound completely healed. In order to avoid any evil effects, it is necessary, M. Sée points out, to use certain precautions in applying the rubber bandage. The compression exerted by it on the soft parts should be very slight, and should never be carried so far as to impede the circulation. Each turn of the bandage should cover one-third or one-fourth of the width of the preceding turn, and no part of the surface of the limb should be left uncovered between the turns, for such uncovered part would soon swell through infiltration of serosity into the meshes of the cellular tissue. Save in those special circumstances in which the bandage should be allowed to remain as long as possible, it ought to be removed every second or third day, and be re-applied after cleansing in a solution of carbolic acid. The effects produced by the bandage depend on two properties possessed by it to the highest degree, elasticity and impermeability. By its elasticity it exercises on the parts covered by it a pressure, which, though always very feeble, is not the less very efficacious, since it is exercised continuously, and is little influenced by any slight changes in volume which the affected limb may undergo. By its impermeability, the rubber bandage establishes an impassable barrier between the part covered by it and the external air. On the one hand, it amasses beneath it the products of perspiration and of cutaneous secretion, so that the wound or ulcer is in a constant state of heat and moisture, as if covered by a poultice. On the other hand, it prevents germs that float in the air from approaching and contaminating the open surface and exciting the putrefaction of the effused fluids, and thus constitutes a very useful adjuvant to the antiseptic dressing.

2. *Vance on Lithotrity.*— Dr. Reuben A. Vance, of Cincinnati, in a contribution to the July number of the *Ann. of Anat. and Surg.*, on 'Certain Movements of the Bladder, and their Relation to Lithotrity', states that there is one point connected with the manipulation of the lithotrite in the human bladder, to which a proper amount of attention has not been given. In addition to the difficulties due to muscular contraction that the surgeon has to overcome during the introduction of the lithotrite, in the first place at the membranous portion, and again in the prostatic portion of the urethra and at the neck of the bladder, there are certain motions of the vesical walls themselves, when stimulated by the presence of this instrument. The following description is given of the procedure that the author adopts and teaches. 'When the beak of the lithotrite is passed through the vesical sphincter, it is to be carried onwards, the blades vertical, until the stone is touched or the posterior wall of the bladder reached. If the stone be touched, the handle is revolved so that the blades pass the calculus, and the journey of the beak is resumed. When the beak reaches the posterior wall, the wheel of the handle is withdrawn, so that the anterior surface of the male blade is brought into contact with the mucous membrane lining the anterior wall of the bladder. Both blades point directly upwards. The surgeon now gently revolves the handles to and fro, so that the blades are brought into contact with both walls of the bladder, and stimulates that organ to contraction, being careful to leave the blades at the close in a vertical position. At first there is what seems like an antero-posterior contraction; the blades are forced towards each other. This tendency to close the blades being resisted, there quickly succeeds a different series of movements: the base of the bladder seems to rise and the stone is elevated and rolled forward; if the blades be now closed, in very many instances, the stone is caught by its centre, thus showing that, as a consequence of this secondary movement, the stone has been carried to the middle of the bladder. As a consequence of the stimulus communicated by the revolving blades of the lithotrite to the mucous lining of the bladder, the vesical

cavity is diminished, first in the anterio-posterior diameter, and next in the vertical diameter. It is probable that during the first movement there is an increase in its vertical measurement, and, during the second movement, of its antero-posterior diameter. Be that as it may, it is an unquestionable fact that, when this series of movements is excited in the way directed, the contractions of the lower part of the bladder are sufficiently powerful and extensive to lift the stone and roll it into such position that the blades, closed while in a vertical direction, grasp it in the situation most favourable for crushing.'

3. *Gaujot on the Treatment of Floating Bodies in the Knee.*—In a recent contribution to the *Rev. de Chir.* (Nos. 5 and 6, 1881) Dr. G. Gaujot, of the Hôpital du Val-de-Grace, states that, since the inquiry of Baron Larrey, in 1861, on the treatment of floating bodies in the knee, direct extraction through a free incision has advanced much in the favour of French surgeons. The subcutaneous operation, though sound in principle, is often attended in practice with certain risks and disadvantages. Penetration of air and blood into the articular cavity cannot always be avoided, and is very likely to result, when through the size of the foreign body it is necessary to cut freely with the tenotomy-knife, or when the synovial membrane is much lacerated. This result exposes the patient to the risks of synovitis, which either may be restricted to the plastic form, or may become purulent. Plastic arthritis, in consequence of the functional impairment in which it results, is a serious complication, and purulent arthritis is very often fatal. Another disadvantage attending the subcutaneous operation is the frequent difficulty and, in some instances, the impossibility of effecting extrusion of the floating body through the orifice made in the synovial membrane. Again, during the interval between the first and second stages of the subcutaneous operation, there is always a risk of the foreign body slipping back into the joint, as there is very little tendency for it to contract adhesions to the peri-arthritic cellular tissue. This result is the more likely to occur when the synovial membrane has been freely incised, and when the foreign body has not been moved to any great distance from the opening into the joint. It is stated in this communication that the death-rate from direct extraction has, during the past fifteen years, been reduced from twenty-two to seven and a half per cent. The author endeavours to prove that this reduction is not solely due to the influence of Listerism. An analysis of fifty-four collected cases in which arthrotomy has been performed since 1863, indicates that a like success to that attained after the use of Lister's method, may be attained by other antiseptic methods, and, indeed, after the use of ordinary dressings. Of twenty-nine cases of floating body treated by arthrotomy, in which Lister's dressing had been applied, two were fatal; whilst of eighteen cases in which ordinary non-antiseptic dressings had been applied, only one had a fatal termination. Such a result, it is pointed out, need not cause surprise if one considers the success that has been attained in ovariotomy and enterotomy by M. Kœberle, who does not make use of Lister's dressing. Articular synovial membranes, when affected by chronic hydrarthrosis, acquire, like other serous membranes that have been exposed to the prolonged contact of morbid products, a certain degree of tolerance that renders them less irritable and less liable to become acutely inflamed. When chronic hydrarthrosis is associated with a floating body within the joint, the tolerance of the synovial membrane is increased through the nature of the original articular affection, since, in changes due to rheumatism, there is much less tendency to suppurative inflammation. In order to ensure success after direct extraction of an articular floating body, certain precautions must be taken in order to avoid acute synovitis. Such precautions consist in preventing the free access of air to the interior of the joint; in making a clean and small wound; in avoiding as much as possible irritation of the synovial membrane during the removal of the floating body; and in the exclusion of any septic agent. These evils, M. Gaujot holds, may be guarded against without resorting to any strict antiseptic treatment. In considering the question whether the extraction of an articular floating body can ensure a permanent cure, the author states that it is to be remembered that in most cases the foreign body does not constitute in itself the articular lesion. It is very often but an epiphenomenon superadded to primordial changes of a chronic arthritic character. The operation usually results in the disappearance of the phenomena due to the presence within the joint of a foreign body, but it does not remove the other results due to antecedent articular changes. There may be a cessation of the characteristic pain and less interference with locomotion, but the symptoms of chronic hydrarthrosis, such as swelling of the joint, crepitus, and a restricted range of articular movements, will too often persist. A decision as to the probability of recurrence should be based rather on the form and composition of the floating body, than on the condition of the joint. The prognosis is favourable in those rare cases in which this body consists of a fragment of bone, or a fibrinous concretion, whilst the indications are just the reverse when it presents one of those many forms which have their common origin in fibro-cartilaginous proliferation of the synovial elements. M. Gaujot states, in concluding, that the operation of direct extraction, though one of very little danger, ought not to be practised save in cases where the functional disturbance is severe, and palliative treatment has already been applied, but without success.

4. *Tillaux on the Tarso-Metatarsal Joints, with regard to Lisfranc's Operation.*—In a paper communicated on April 13th to the Société de Chirurgie of Paris (*Bull. et Mém.*, No. 4, 1881), it is stated by M. Tillaux that he has been struck with the disagreement amongst anatomists in their descriptions of the articulations of certain bones of the tarsus with each other, and also of the tarso-metatarsal articulations. The author is of opinion that there are special arrangements of the ligaments and synovial membranes, which have much practical importance, but which have received but little if any attention from authors. With regard, in the first place, to the interosseous ligaments, it is well known that Lisfranc considered, as the key of the articulation, the ligament (internal interosseous) which with its oblique fibres binds the inner part of the head of the second metatarsal bone to the outer surface of the internal cuneiform. In addition to this principal bundle, there is one to be considered which passes directly from the first cuneiform to the first metatarsal bone, and covers the external surface of the cuneo-metatarsal articulation. Another ligament of less surgical importance, but still demanding recognition, has its posterior point of insertion on the external surface of the external cuneiform bone. This bifurcates, and is attached by one of its divisions to the external surface of the head of the third metatarsal, and, by the other division, to the inner surface of the head of

the fourth metatarsal bone. It has the form of the letter Y, the tail being directed backwards. These two ligaments separate the metatarsal articular line into three distinct parts. Internally, there is the articulation of the first cuneiform with the first metatarsal bone; in the middle there are the articulations of the second and third cuneiform bones, with the second and third metatarsal bones; and, finally, the external group is formed by the articulation of the cuboid with the two last metatarsal bones. Each of these divisions of the tarso-metatarsal articulation has its special synovial membrane, and the interosseous ligaments constitute insurmountable barriers around the three serous cavities. There is also the important arrangement, that the synovial membrane of the articulations of the second and third cuneiform with the second and third metatarsal bones is continuous with that of the articulation of the scaphoid with the three cuneiform bones, through the intermediate portion occupying the space between the outer cuneiform bones. From these arrangements it follows that, in an anatomical sense, partial amputations of the foot are quite justifiable; for disarticulation of one of the metatarsal bones does not open a synovial sac common to all the tarso-metatarsal articulations, but only one of the three cavities that have been described. The author draws also another deduction from his description. Any amputation involving the articulations of the second and third cuneiform with the second and third metatarsal bones must open the synovial membrane between the scaphoid and the three cuneiform bones. If the amputation be performed on account of recent injury, such exposure of this synovial sac is not likely to have any serious results; but, if the surgical intervention be necessitated by caries, the evil will in all probability be only partially removed, from the fact of the disease having already attacked the articulation of the scaphoid with the three cuneiform bones. The author concludes that Lisfranc's operation, though it may be legitimately practised in cases of injury, ought to be rejected when intervention is necessitated by articular and osseous lesions of long standing.

5. *Bruns on Transplantation of Marrow.*—Prof. Bruns of Tubingen reports, in the *Archiv für Klin. Chir.*, Band xxvi, Heft 3, the results of some experiments he has lately made on animals, with the object of determining whether portions of transplanted bone-marrow can give rise to the formation of deposits of true osseous structure. An osteogenetic function of marrow, though indicated by the existence of an internal as well as of an external mass of callus after fracture, has been denied by many pathologists, and especially by Lebert, who held that the internal callus is only a displaced portion of the callus formed by the periosteum. It has been held also by Maas and many others, that the marrow and medullary membrane can only absorb and never form bone. The only cases in which any bone-producing action on the part of marrow can be proved in the human subject, are pathological instances of intramedullary deposition of bone without fracture, and without any coexistent formations of bone externally. Werner, by administering phosphorus with food, succeeded, even in full-grown animals, in bringing about almost complete ossification of the medullary cavity of long bones; and similar results have been attained by Busch through injections of mercury in small quantity into the arteria nutritia. That this internal formation of new osseous tissue in a long bone may be due to the action of specific stimuli, as well as to that of irritating agents introduced from without, may be proved by specimens of so-called osteosclerosis, in which disease the whole of the medullary cavity is often occupied by a very hard ivory-like substance. In order to decide whether or not this proved osteogenetic action of marrow be of a strictly pathological character, and analogous to the rarely observed ossification of muscular and testicular structures, Dr. Bruns instituted an extensive series of experiments. It was proposed to settle this question in the same way that the bone-forming capability of periosteum had been proved, namely, by transplantation. Experiments of this kind had, however, been previously made, first by Ollier and Maas, who obtained but negative results, next by Goujon, and afterwards by Backow, both of whom seem to have had some success. In Bruns's first series of experiments, performed in sixty instances on rabbits and fowls, and in six instances on young dogs, and in which the marrow was always transferred from one animal to another, there was invariably failure. In a second series of experiments on nineteen animals, in each of which experiments the transplantation was made on one and the same animal, deposits of true bone were found in twelve instances. Professor Bruns states that the animals that are best suited for experiments of this kind are young dogs. A portion of the shaft of the femur or tibia is resected, and the marrow contained in this resected fragment is removed in an unbroken cylinder. Portions of this cylinder are then inserted into fresh wounds on the breast or back of the same animal, either into the subcutaneous fat or in a superficial part of the muscular layer. The wounds are then carefully closed by means of sutures. The following changes, it is stated, take place in each instance of successful transplantation. A diffuse swelling is at once formed, which speedily begins to diminish, and is replaced about the fourteenth day by a movable nodule, in which bony tissue already exists in scattered foci. By the twenty-fourth day, these foci have usually amalgamated into a single piece of bone. Microscopical examination proves that the nodule, in its early stage, is composed of osteoid tissue, cartilage, and newly formed osseous tissue, and that the fully developed hard mass consists of true bone. These experiments, Professor Bruns asserts, prove that bone-marrow, completely separated from its connection with bone, and transplanted under the skin of the same animal, at a remote part of the body, may give rise to the formation of bone and cartilage. The swelling at the seat of transplantation ossifies in part directly, and in part by the conversion of cartilage and osteoid tissue into hard bone. The same process takes place in the formation of both the inner and the outer callus after fracture; and it may be assumed that bone is formed from the medulla in a way similar to that in which it is formed from the inner surface of the periosteum. It is held by Professor Bruns that in each instance the osteogenetic function is due to the same elements, namely, to osteoblasts, which exist in the inner periosteal layer, and are scattered amongst the elements of bone-marrow, particularly in young animals. Professor Waldeyer of Strasburg, who has examined these specimens, agrees in the view of the part played by the osteoblasts in the ossification of marrow, and is not disposed to admit any participation in this process of leucocytes of the marrow, wandering leucocytes from the blood, metamorphosed fat-cells, or newly formed spindle-shaped connective tissue-cells.

W. Johnson Smith.

6. *Charvot on Effusions of Blood at the Fold of the Elbow.*—Dr. Charvot relates (*Rev. de Chir.*, 10th Sept. 1881) six cases of this affection, of which, he states, an account is nowhere given, and which may give rise to most curious errors of diagnosis. The following are the author's conclusions. 1. Injuries which affect the elbow (directly, such as contusion, dislocation; or indirectly, such as a sprain or diastasis) frequently give rise to considerable effusion of blood throughout the whole of the upper limb, and especially at the fold of the elbow. 2. These extravasations of blood appear to arise from rupture of the vessels around the joint, and especially of the interior brachial. 3. The effusion of blood is not always completely absorbed, and is transformed into fibrinous clots, occupying the antero-internal aspect of the fold of the elbow in front of the articulation, and in the substance of the brachialis anticus. 4. The resulting tumour is as large as an egg, unequal, of cartilaginous or even osseous hardness. At first it is independent of the bone, but subsequently it may become attached to the humerus. 5. Thus the effusions of blood which partly fill up the coronoid cavity may interfere with the movements of the articulation, and considerably limit flexion. 6. They generally remain stationary for a long time, and are but little influenced by ordinary treatment. 7. Finally, they may give rise to errors of diagnosis, and may be mistaken for exostoses of the humerus, or tearing away of the coronoid apophysis, etc.

7. *Menard on Experimental Researches on the Forcible Straining of Genu Valgum.*—M. Menard studies in this paper (*Revue de Chir.*, 10th Sept. 1881) the lesions produced in forcible straining of the knee on the cadaver, whether with the hands or with the apparatus of Collin. Without entering, he says, upon the clinical side of the question, and without establishing a comparison between this operation and other modes of treatment, some slow and belonging to orthopædic practice, others rapid, such as osteotomy, his object is to clear up the mechanism, and to determine the lesions, of the purely operative proceeding, as constituting one of the elements which permit the question to be decided as to its fitness and uses in surgery. His conclusion is that in rapid straightening of the genu valgum by Delore's method, the operative proceeding carries the knee, not directly outwards, but outwards and backwards; at the same time, there is a tendency to bend the tibia inwards on the femur, and to force the extension of the knee. The articulation resists, therefore, not only by its external lateral ligament, but also by those which limit the extension, the posterior ligament and the intra-articular ligaments. This mechanism explains why it is the femur which comes away rather than the articulation. The lesion produced is very generally the stripping of the epiphysis from the inferior extremity of the femur and a large and considerable periosteal attachment, behind and external to the diaphysis. The employment of Collin's apparatus, or of any other similar one, appears to him preferable to manual force. With the hands, somewhat less lesions are produced; the detachment of the epiphysis is accompanied with crushing of the spongy tissue; moreover, the ligaments are apt to be torn away. The results appear to be very analogous in patients from two to six years of age. Beyond that age, it is a question whether the resistance of the femur becomes greater than that of the ligaments. He thinks that even then tearing of the ligaments must be very rare if the operation is well performed. This opinion is indeed only the expression of the results obtained by MM. Faraboeuf and Terrillon.

8. *Coates on a New Method of Operating upon Internal Piles.*—In the *Brit. Med. Jour.*, Aug. 1881, p. 350, Mr. W. M. Coates describes the following plan for the removal of internal hæmorrhoids. A specially constructed clamp, a diagram of which is given, embraces as much of the piles on one side as possible, and is securely fastened. Needles, armed with the finest carbolised catgut, are now passed beneath the clamp at intervals of an eighth of an inch. As each thread is passed, the ends are held against each buttock by an assistant. The piles are then cut off smoothly, quite close to the outside of the clamp, the blades of which are then separated, and any pumping artery secured with the finest catgut. When all bleeding has ceased, and the clamp has been removed, the edges of the little wound are brought close together, and secured by the sutures; then, after being cleansed with a one per cent. carbolic wash, it is dried and painted with collodion or styptic colloid. A two-grain opium suppository is then placed in the rectum, and the operation is finished, unless there be more than one mass of piles to remove. In sixteen cases where this mode of procedure has been carried out, the results have been uniformly satisfactory.

9. *Cheyne on Retropharyngeal Abscess opened from the Outside of the Neck.*—In the *Med. Times and Gaz.*, Aug. 1881, p. 254, Mr. Watson Cheyne reports a case of retro-pharyngeal abscess, in a man aged 42, in which an incision was made at the posterior border of the sterno-mastoid muscle, commencing about one inch below the mastoid process. The deep cervical fascia was carefully divided, and by the finger and forceps the soft tissues were pushed aside, and a channel burrowed to the back of the pharynx. The wall of the abscess was then opened, and a drainage-tube introduced. The man was discharged cured after twenty days.

10. *Coombs on a New Method of Treating Subcutaneous Nævi.*—Dr. Carey Coombs, in the *Lancet*, Aug. 1881, p. 374, suggests that, in destroying nævi by the electric cautery, two silver wires should be passed through the growth, parallel to each other, but a quarter of an inch apart. If each wire, separately, be connected with a proper battery, great heat is produced during the one or two seconds of contact; the ends of the wires are then twisted together and left *in situ*, ready for another application after the end of a few days. By this plan, less pain is caused than by the introduction of needles at each operation, and a single cell (bichromate, Grove's, or Bunsen's) is sufficient, the only resistance being the fine silver wire. In a severe case, where the fossa, on the left side of the nose of an infant nine months old, was filled up by a large subcutaneous nævus, three applications were sufficient to produce a perfect cure.

11. *Bryant on Warren's Radical Cure for Hernia.*—In the *Lancet*, August 1881, p. 374, a case is reported, in which, under Mr. Bryant's observation, at Guy's Hospital, in August 1880, Dr. Joseph H. Warren performed his operation for the radical cure of a reducible inguinal hernia. After returning the hernia, Dr. Warren injected twenty drops of the prepared solution of white oak-bark into the tissues around the neck of the sac. The results were, so far as Mr. Bryant could judge, satisfactory, but the patient failed to report himself later than six weeks after leaving the hospital. [In the *Gaz. des Hôpitaux*, for September 1854, M. Jobert gives an account of three cases of inguinal hernia radically cured by injecting

iodine into the neck of the hernial sac. M. Velpeau had, ten years previously, first noticed the advantages of iodine injection in such cases.—*Rep.*]

RICHARD NEALE, M.D.

PATHOLOGY.

RECENT PAPERS.

1. GRANCHER.—On Scrofula and Tuberculosis. (*Le Progrès Méd.*, 1881, No. 21.)

2. LETULLE.—On the Existence of Cardiac Lesions in Locomotor Ataxy. (*Gaz. Méd.*, Nos. 39 and 40; *Centralb. für die Med. Wissen.*, 1881, No. 17.)

3. DEUTSCHMANN.—The Tubercular Virus. (*Centralbl. für die Med. Wiss.*, 1881, No. 18.)

4. WAGNER.—Chronic Bright's Disease. (*Deutsch. Arch. für Klin. Med.*, Band xxvii.)

5. LANGE, F.—Blood from beneath the Permanent Antiseptic Dressings. (*New York Med. Record*, July 1881.)

6. SUDAKOFF.—The Relation of Tuberculous Intestinal Ulcers to the Ulcerative Processes of the Lungs. (*Inaug. Diss.*, St. Petersburg, 1880.)

7. TAPPEINER.—The Artificial Production of Tuberculosis in Dogs by Inhalation. (Virchow's *Archiv*, Band lxxxii.)

8. KRATTER.—On Adipocere. (*Zeit. für Biologie*, Band xvi.)

9. PICOT.—Pott's Disease associated with Pulmonary and Meningeal Tuberculosis, Thrombosis of the Left Anterior Cerebral Artery, and Cerebral Softening. (*Gaz. Hebdom. des Sciences Méd.*, April 2, 1881.)

10. GRAWITZ.—The Theory of Prophylactic Inoculation. (Virchow's *Archiv*, Band lxxxi.)

11. KEY and KJELLBERG.—A Case of Rupture of the Septum Cordis. (*Hygiea*, and *Nord. Med. Arkiv.*, Band xiii, Heft 2.)

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1. *Grancher on Scrofula and Tuberculosis.*—M. Grancher, in an address to the Société Médicale des Hôpitaux on the relation of scrofula and tuberculosis (*Le Progrès Médical*, 1881, No. 20), gives the following as his conclusions. 1. Tubercle is a fibro-caseous neoplasm which developes in three stages; this development may be incomplete, being arrested at the early stages, or complete, requiring for its production some months or the whole of life. 2. Pathological anatomy and experimental pathology agree in restoring most of the so-called scrofulous affections to the category of tuberculosis. 3. Lupus and superficial inflammations of the skin and mucous membrane will, probably, in their turn be similarly classed. 4. The needs of practice forbid our confounding all tubercular affections; it is convenient to retain the word scrofula to designate those which are slight and curable tubercular affections.

2. *Letulle on the Existence of Cardiac Lesions in Locomotor Ataxy.*—M. Letulle (*Gaz. Méd. de Paris*, Nos. 39 and 40, 1880; *Centralb. für die Med. Wiss.*, No. 17, 1881) publishes two cases of insufficiency of the aortic valves with extensive atheromatous degeneration of the arteries, occurring in the course of locomotor ataxy. He quotes the views of Berger, Rosenbach, and Grasset, as to frequency of this connection, and suggests that the wide-spread atheromatous degeneration of the vessels explains the coexistence, as this degeneration of the smallest spinal arterioles probably gives rise to the disease of the posterior columns.

3. *Deutschmann on the Tubercular Virus.*—M. Deutschmann (*Centralbl. für die Med. Wiss.* 1881, No. 18) says that, when tubercular pus is allowed to stand, preferably in a vessel closed with cotton-wool, it separates into two layers, the upper being serum containing numerous small elements identical with the 'monas tuberculosum' of Klebs and Schüller, but free from cells; the lower consisting of tubercular pus. He found that the clear serum, when injected into the anterior chamber of rabbits' eyes, caused no tuberculosis, while the lower layer invariably gave rise to the specific product. A large quantity of serum and a very small quantity of pus, gave the same results. The clear fluid from the anterior chamber of a child's eye, which presented all the clinical appearances of tuberculosis of the iris, and contained the characteristic micrococci, gave negative results when injected into a rabbit's eye.

4. *Wagner on Chronic Bright's Disease.*—E. Wagner (*Deut. Arch. für Klin. Med.*, Band xxvii, s. 218; *Centralbl. für die Med. Wiss.*, 1881, No. 27) thinks that the so-called three stages of Bright's disease may overlap each other, and divides the second stage into the following three forms, which he illustrates by cases. *a.* Enlarged and diffusely diseased kidneys; glomerular capsule-epithelium greatly proliferated; atrophy of the glomerular capillaries; fatty degeneration of the epithelium of the convoluted tubes; dilatation of the tubules; numerous hyaline, not often fatty cylinders; stroma swollen by œdema, only in places, and particularly round the glomeruli, filled with round cells; urine scanty, under 200 cubic centimètres daily, clear, very albuminous, of high specific gravity, containing numerous hyaline and fatty casts, white blood-corpuscles, and fatty granule-cells; great anæmia; marked œdema; rapid wasting; later, hypertrophy of the left ventricle. *b.* Kidneys which consist of old atrophied patches, and recent inflammatory tissue, of normal size, or enlarged, smooth or slightly granular on the surface. It is a commoner form than the preceding. The urine varies in the course of the disease, being at times like parenchymatous nephritis, at others as it is in contracted kidney. Usually, hypertrophy (generally marked) of the left ventricle; mostly pulmonary symptoms and retinitis; course chronic. Death from uræmia, dropsy, cerebral hæmorrhage, croupous pneumonia, lobular pneumonia, cardiac failure, etc.; urine generally pale, and containing blood. *c.* Ordinary granular kidneys. Here he reckons the secondary contracted kidney.

ROBERT SAUNDBY, M.D.

5. *Lange on Blood from beneath the Permanent Antiseptic Dressing.*—Dr. F. Lange presented to the Surgical Society of New York (*New York Medical Record*, July 1881) a specimen of blood with the following history. It was removed from a patient who two weeks previously submitted to amputation of the breast and removal of the contents of the axilla. The permanent antiseptic dressing was applied. On account of the extremely nervous condition of the patient, Dr. Lange removed the dressing on the fifth day, when it was found that the wound had healed by first intention. In attempting to remove the dressing, one of the flaps was raised, and hæmorrhage occurred beneath it. The blood underwent the same changes as occur in cases of subcutaneous injury, but much remained, which was aspirated six or seven days afterward. To ascertain its character, about two ounces of a dark entirely fluid blood were withdrawn, which was examined microscopically, and found to contain living bacteria. The number of the white blood-corpuscles was not increased. Some of the blood-corpuscles, both red and white, were undergoing disintegration. A number of the red ones were almost colourless, hardly visible; in the majority they were

stellated and shrivelled. Dr. Lange thought that the bacteria entered during the operation and remained, but, because of the antiseptic measures, were of such low vitality that they were unable to act upon this mass of blood. The patient remained entirely well.

6. *Sudakoff on the Relation of Tuberculous Intestinal Ulcers to the Ulcerative Processes of the Lungs.*—The question as to the relation of intestinal ulcers to simultaneous processes in the lungs not being sufficiently settled, the author, under the supervision of Professor Iwanowski, undertook to write an essay on the above-mentioned subject (*Inaug. Dissert.*, St. Petersburg, 1880), availing himself of the results of *post mortem* examinations obtained at the Pathologo-Anatomical Institution of the Medico-Surgical Academy. In the course of 12½ years, records of 4,342 necropsies had been made. Amongst these were 1,260 cases of chronic disease of the lungs, and 940 of intestinal ulceration. Of tuberculous ulcers of the intestine 679 cases were noted; and 20 were mostly associated with chronic diseases of the lungs, and only in one case were the lungs sound. Of 227 cases in which no destruction of the pulmonary tissue had yet shown itself, 107 (47.13 per cent.) were found with tuberculous ulcers of the intestine; while in 55 (76 per cent.) of the cases in which breaking down of the lung-tissue had commenced, these ulcers existed. Of those cases in which tubercle was present in the lungs, 71.42 per cent. had them in the intestine also. Simultaneous tuberculosis of the liver was observed in 227 cases, of the peritoneum 87 times (69 per cent.) The author arrives at the following conclusion. Tuberculous ulcers of the intestine are not so frequent as Niemeyer and Kolberg supposed. They are also observed in cases in which as yet a formation of tubercles in the lungs has not begun. Tuberculosis is often complicated by the formation of follicular ulcers. Intestinal tuberculosis without affections of the lungs is very rare.

7. *Tappeiner on the Artificial Production of Tuberculosis in Dogs by Inhalation.*—Resuming his former experiments (see London Medical Record, May 15, 1879) the author (Virchow's *Archiv*, Band xxxii) tried to produce artificial tuberculosis in dogs by means of inhalation of cheesy scrofulous pus. For ten days, two dogs were made to inhale about half a gramme of the pus with 100 grammes of water; while two other dogs inhaled an equal quantity of phthisical sputa. The former two remained healthy. The experiment was then repeated upon two other dogs with a negative result. The inhalation of purulent bronchitic sputa had the same effect. When, after twenty-three days, the dogs which had inhaled phthisical sputa were dissected, there were found in both lungs and in the spleen numerous small miliary nodules of a grey colour, and reaching the size of a lentil, which Grawitz pronounced to be real tubercles, while Friedländer characterised them as insignificant centres of hepatisation in the lungs, and as small vascularised lymphoid nodules in the spleen. Of four dogs which, in order to determine the period of incubation, were likewise made to inhale large quantities of phthisical sputa, two, after the lapse of 13 and 19 days respectively, showed no sign of tuberculosis, while the third, which was dissected after two months, had catarrhal pneumonia and numerous miliary nodules in the lungs and pleura. There are no statistics about the fourth dog. The author, from these and previous experiments, concludes that the inhalation of phthisical sputa never fails to produce tuberculosis, but that the period of incubation is between 19 and 23 days; and that the inhalation of coagulated scrofulous pus from lymphatic glands, like the inhalation of purulent bronchitic sputa, has a negative result.

8. *Kratter on Adipocere.*—F. Kratter of Graz says (*Zeitschr. für Biologie*, Band xvi, 1880) that adipocere is of importance, not only to the pathologist, but also to the coroner, who has to do with exhumed or drowned bodies. The author has abandoned the common method of macerating in troughs, or interring the objects of examination, but has placed them in glass vessels, in order to follow up daily the changes which they undergo. It was found to be of no consequence whether the vessel was covered or open, whether well-water or river-water was employed. The water, however, was changed every other day. The author arrived at the following conclusions. There are three different stages observed. 1. The stage of putrefaction, or preliminary stage, occurs without exception, and never lasts less than three weeks. No macroscopic changes are then discovered. 2. The stage of saponification is marked by the subcutaneous adipose tissue plainly changing into adipocere, which is recognised by the tissue becoming white, opaque, crumb-like, and stiff. This transformation progresses from the interior towards the surface. 3. The stage of saponification of the albuminous substances never commences before the end of the third month, and often later than that. Microscopic examination proves adipose degeneration of the subcutaneous cellular tissue to exist already towards the end of the first stage; in later stages, adipose degeneration of the muscular structure, and of the medulla, with a certain degree of decalcination.

9. *Picot on Pott's Disease associated with Pulmonary and Meningeal Tuberculosis, Thrombosis of the Left Anterior Cerebral Artery, and Cerebral Softening.*—The chief points of interest in this case are (*Gaz. Hebdomadaire des Sciences Méd.*, April 2, 1881): (*a*) the localisation of tubercles in the course of the anterior cerebral arteries; (*b*) thrombosis of the left anterior cerebral artery, and consequent softening of the corpus callosum, the convolution of the corpus callosum, and part of the internal aspect of the frontal convolutions; (*c*) inflammatory softening, dependent on meningitis, of the internal and anterior part of the right hemisphere; (*d*) the absence of motor and sensory disorders, the lesions being situated outside the psychomotor and sensory centres. It is interesting to note that, during life, the only mental symptom was some amount of intellectual torpor. W. B. Hadden, M.D.

10. *Grawitz on the Theory of Prophylactic Inoculation.*—The author (Virchow's *Archiv*, Band lxxxi), choosing for experiment the penicillium, aspergillus, and oïdium lactis, on account of their large size, succeeded, by successive cultivations in alkaline solid nutrient substances, in making these moulds accustomed to the nutrient conditions of the animal organism, so that they could be changed to parasites. As this artificial cultivation proceeds many transition steps are obtained in the adaptation which they undergo, until such a malignant form is reached, that very small injections of the fungus into the veins are sufficient to fill the animal with the organism. Grawitz finds that the different organs are affected in a very constant succession after injections into the blood-vessels. The favourite seats of the fungus-formation are the kidney and liver, which are attacked by quite lowly acclimatised spores. In a yet further stage of the cultivation, the muscle and intestine, and still

later the spleen, lymphatic glands, and medulla of the bones are affected; while in the highest grade of malignity little knots of the fungus are observed in the lungs and brain. The author ascribes the stronger resisting power of certain organs, for instance, the brain, to their greater nutritive energy allowing them to render opposition to the lowly cultivated mould in the struggle for the nutritive material. Just as in culture experiments a struggle is observed between co-existing fungi, out of which the mould in the ascendant goes forth strengthened, so a similar struggle for existence between the animal and plant cells was induced by the injection of large doses of lowly malignant, or small doses of highly malignant mould. By inoculation a protection was uniformly won against later injections, the resistance being in proportion to the violence of the inoculation affection. The injection of small quantities of malignant mould—which developed a mild form of the particular mould-disease—caused a complete immunity for the rabbits, if, after the lapse of four to six weeks, fatal quantities of highly malignant mould were introduced. The endurance of the power of resistance rests on inheritance; for, once won, it is transmitted from cast-generation to cell-generation; yet this peculiarity of the tissues is lost with time, therefore a periodical inoculation is necessary. By this theory of an acquired resistance obtained by the component elements of the tissues of the body, Grawitz explains the protection afforded by an attack of scarlatina, measles, etc., and small-pox, against future contagion; and the protective influence of vaccination in the latter disease.

FREDERIC S. EVE.

11. *Key and Kjellberg on a Case of Rupture of the Septum Cordis.*—Professor Axel Key and Dr. Kjellberg relate in *Hygiea* for 1880 (*Nord. Med. Arkiv*, Band xiii, Häft 2), the case of a man, aged 75, previously healthy, who, in July 1880, was attacked with pain in the chest, eructations, general malaise, and pain in the left arm. He recovered so much as to be able to go out daily, but soon afterwards had an attack of weakness in the right arm. From this he had recovered somewhat a month later; but one day after dinner he was suddenly seized with pain in the region of the stomach, a sense of oppression in the chest, and pain in the back on the left side. In the evening, his hands and feet became cold. Over the apex of the heart, and though a great extent, a sharp systolic murmur was heard, replacing the first heart-sound, the heart's action was regular; the pulse could scarcely be felt in the right arm, and not at all in the left. He died during the night. At the necropsy, the heart was found to be somewhat hypertrophied. Nearly the whole of the septum ventriculorum was separated from its connection with the posterior muscular wall, and the posterior wall of the right ventricle was cleft for a very considerable extent. The rent began at the upper part of the left ventricle, about two-fifths of an inch from the aortic valves, and extended to the apex of the heart; for about four-fifths of an inch at the lower part it was complete, so that the two ventricles communicated. At the upper part, the rupture extended into the posterior wall of the right ventricle, separating it into two layers. Nearly the whole surface of the rupture was covered with a thin and rather adherent layer of fibrin. The muscular tissue in general was flaccid, of a deep yellowish grey colour. There were no essential changes in the valves or in the endocardium. The coronary arteries were in a state of advanced atheromatous degeneration, especially the right, the lumen of which, where it bent round the right border of the heart, was entirely filled with a firm adherent greyish blue thrombus, rather more than an inch and a half long, and ending in a firm conical point. About two-fifths of an inch within, at the posterior part, the artery divided, and sent down in the ventricular furrow, behind the septum, a descending branch, which principally supplied blood to the ruptured part. No large ruptured vessel could be detected. Dr. Key says that the obstructing thrombus, in connection with the atheromatous degeneration, probably played the chief part in the production of the rupture. Probably, when the thrombus was formed, a rupture of a vessel with hæmorrhage into the muscular tissue took place, producing distension of the muscular structure, which at last burst into the left ventricle, after which the rupture extended.

A. HENRY, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. BAKER, MOSES.—On a successful case of Cæsarean Section necessitated by Uterine Fibromata. (*Amer. Jour. of Obst.*, July 1881.)

2. FAUCON.—On the Treatment of Prolapsus Uteri. (*Archives de Tocologie*, May 1881.)

3. GUSSEROW.—Annual Report of the Lying-in Charity in Berlin. (*Charité-Annalen*, 1881.)

4. LAPPONI.—Puerperal Infection in a Man. (*Rivista Clinica di Bologna*, December 1880.)

5. LEBLOND, A.—Amputation of the Neck of the Uterus in Chronic Metritis. (*Intern. Med. Cong.*, Lond. 1881.)

6. MOUAT, F. J.—Statistics of Childbirth in the Lying-in Wards of the Workhouse Infirmaries of England and Wales for the ten years 1871-80.

7. REIMANN.—Birth of a completely broken-up Fœtus. (*Centralb. für Gynäk.*, No. 16, 1881.)

8. ROTHE, C. G.—On Puerperal Fever. (*Betz's Memorab.*, 1881, Heft 5.)

9. VEIT.—On the Stitching of freshly Lacerated Perinæa. (*Deutsche Med. Woch.*, 1881, No. 20.)

10. VOORHEES, S. R.—Hysteralgia during Gestation. (*Obstet. Gaz. Cin.*, June 1881.)

11. VAN DE WARKER, ELY.—Occlusion of the Canal after the Operation for the Repair of Laceration of the Cervix Uteri. (*Ibid.*)

12. WASSEIGE, A.—Practical Essays on the Last Modification of Tarnier's Forceps. (*Annal. de Gynéc.*, July 1881.)

13. DE ZOUCHE.—A case of Battey's Operation. (*Aust. Med. Jour.*, April 15, 1881.)

14. TERRIER.—Incomplete Removal of Ovarian Cysts. (*Revue de Chir.*, 10th Aug., 1881.)

1. *Baker on a Case of Cæsarean Section.*—The patient, aged 34, primipara, was found, on examination, to have one fibroid tumour filling the pelvis so that the os uteri could only be reached with great difficulty, and another fibroid mass above and to the right of the umbilicus. The pelvic tumour could not be pushed up. Although she was in labour, the pains were not expulsive, and it was not until three days after the rupture of the membranes that Dr. Baker proceeded to perform Cæsarean section. The first incision was made from a point two inches above the pubes, to two inches above the umbilicus in the median line. The uterus was incised in the same manner from below upwards, the wound being about six inches in length. The head was in the

following position: the face presenting towards the mother's left groin; the right side of the head resting on the top of the os pubis. The head was not only crowded forward by the lower tumour, but was pressed downward by the upper tumour, and was thus flexed laterally towards the left shoulder, and it was firmly held in this position for at least six weeks before the operation, which fact had made it resemble a third uterine tumour. The right parietal and frontal bones received quite a deep indentation from pressure against the brim of the pelvis. The child was lifted out of the uterus by the axilla, and separated from the cord in the usual way. The placenta was attached to the posterior wall of the uterus between the two tumours. It was peeled off. Severe hæmorrhage ensued, which was arrested by pressure with a towel wet with cold carbolised water. The uterine wound was closed by four carbolised silk sutures, passed in near the mucous surface and out through the peritoneal coat. The abdominal wound was closed by five deep silver wires, and four superficial carbolised silk sutures. The wound was supported with broad strips of adhesive plaster. On the eighth day after the operation, phlegmasia dolens set in in the left leg. By the thirtieth day she had fully recovered both from the operation and from the phlegmasia. About the tenth day after she got up, the cicatrix suppurated in two places; one just below the umbilicus, the other half way between the umbilicus and pubes. The lower sinus allowed the passage of a probe three inches into the body of the uterus. The upper sinus discharged for about three months, when the tumour disappeared and the sinus healed. The lower opening was closed by cautery. The uterus remained adherent to the walls of the abdomen at the site of the lower fistulous opening. The lower tumour still fills the pelvis. The patient feels and looks perfectly well.

5. *Leblond on Amputation of the Cervix Uteri.*—Dr. Leblond has restricted himself, in this paper, to showing that there are certain cases of chronic metritis which resist all treatment, except amputation of the cervix uteri. M. Leblond enumerates the anatomical lesions which occur during the first period, the period of softening or infiltration. It is during this period, when the cervix is large and covered with ulcerations which bleed on the slightest touch, that the operation is specially applicable. The amputation, in the author's experience, produces retraction of the uterine tissue by the production of fibres of connective tissue, and when it has become cicatrised presents the appearance of a nulliparous uterus. M. Leblond uses the galvano-cautery wire and does not draw down the cervix whilst amputating. The amputation is performed through the speculum, so that the operator sees what is going on.

6. *Mouat on Metria in Workhouse Infirmaries.*—In the institutions within the registration-area of London, there were 204 maternal deaths in 23,117 deliveries, or 1 in 113. In the provinces there were 561 maternal deaths in 64,609 deliveries, or 1 in 115. This gives the death-rate during the ten years 1871-80. This death-rate was less in the workhouse infirmaries than in the entire population, and the whole record appears to Dr. Mouat to establish the fact that a pauper woman delivered in a workhouse lying-in ward has as fair a chance of life as a poor woman confined in her own home.

7. *Reimann on the Birth of a Completely Broken up Fœtus.*—The patient, aged 45, had had eight children, and, three years before, had had a miscarriage. Since that time she had suffered from a vesico-vaginal fistula, which had been operated upon twice without any benefit. Menstruation, which had otherwise been quite regular, had ceased three months; but, a few days before she saw Dr. Reimann, severe hæmorrhage had set in, accompanied by the discharge of some fœtal bones and pieces of flesh. On examination, the os uteri was hard, but open sufficient to allow the passage of a finger. The internal os uteri was occupied by a flat bone, which prevented the finger from entering the uterus, and which could neither be pressed back nor drawn out. Two days later, Dr. Reimann removed the bones from the uterus by means of a small forceps, through a Sims's speculum. The extracted bones appeared to be those of a six months' fœtus. The larger bones were completely macerated; it was only on the bones of the thorax and pelvis that any traces of muscular tissue could be found. No traces of the intestines, placenta, or membranes could be found. The uterine cavity was washed out with a weak solution of carbolic acid, and the patient rapidly recovered. On later examination, Dr. Riemann found a vesico-vaginal fistula close to the anterior lip of the os uteri. He operated for its closure, but only with partial success. How long the dead fœtus had remained in the uterus, could not be determined. In any case, the cessation of the menses three months before the removal of the fœtus had no connection with the time the child had been in the uterus. On the other hand, it could not have been more than two and a half years *in utero*.

11. *Van de Warker on Occlusion of the Canal after Emmet's Operation.*—Dr. Ely Van de Warker relates the case of a lady in whom he found the vaginal cervix elongated, hypertrophied, and bilaterally lacerated, with ectropion. She was operated on by Dr. Emmet for the repair of the laceration. Locally and generally her health improved after Emmet's operation, with one exception; this was increasing dysmenorrhœa. The symptoms of obstruction of the cervix gradually augmented as months passed, until the woman's health began to give way. The canal of the cervix could not be dilated, owing to the impossibility of finding the os externum. On examination, the vaginal portion presented a conical appearance, no os uteri could be seen, and the uterus was retroverted. Exploration of the cervix by a small probe showed a minute opening on the sloping lateral surface, about one eighth of an inch from the extremity of the cervix. The probe passed in about half an inch, and was arrested. The canal was evidently tortuous, and surrounded by cicatricial tissue. The probe being used as a guide, it was followed up by a small knife; and when more room was thus gained to manipulate the probe, it made another advance, which was again followed up by the knife. In this manner, the os internum was with some difficulty passed. The canal thus cut out of the dense tissue composing the cervix, was further enlarged bilaterally. The canal was kept open by an intra-uterine stem. The patient did well.

13. *De Zouche on a Case of Double Oöphorectomy.*—The patient, aged 30, had been well until her confinement. After the lying-in was at an end, severe ovarian pain appeared. The pain so increased in severity that, in spite of all remedies, it became intolerable. For days she could take no sustenance, except a cup of tea. She seldom slept a whole hour at one time. Sometimes she would be unable to stand, at other times she would roll about the floor in pain. She had not been twenty yards from the

house since her confinement, as walking caused her much pain. Dr. de Zouche, therefore, performed oöphorectomy by the abdominal section. Immediately after the operation both ovaries were weighed. The left weighed 120 grains, the right 113 grains. Both contained a number of cysts about the size of a pea. On cutting into one of these, a clear watery fluid spouted out. Carbolic precautions were used. On the twenty-ninth day she was able to sit in the garden. The patient has been able to eat and sleep well since the operation. The improvement has been decided, and the patient is glad the operation has been done. FANCOURT BARNES, M.D.

14. *Terrier on Incomplete Removal of Ovarian Cysts.*—M. Terrier (*Revue de Chir.*, 10th Aug. 1881) puts the following question. Does the incomplete removal of ovarian cysts, resulting from the existence of extensive solid or vascular adhesions to important organs, give, as has been said, deplorable results, and should it be avoided uniformly, as Kœberlé advises; or is it, on the other hand, an operation which is acceptable, and even a method counselled sometimes by prudence, and not by necessity (Péan)? M. Terrier relates some private cases, and examines the recent publication of cases and statistics by Spencer Wells and Péan, with the following results. 1. Incomplete operations ending with the opening of the cyst, suture of the walls to the abdominal wound, and drainage, give very different results, according to the nature of the cystic tumour. 2. When the cyst is unilocular—as serous cysts and dermoid cysts of the broad ligaments are—the results may be excellent, and the cystic cavity ends by being completely filled up. 3. The same result s perhaps possible in certain cysts which are unilocular from a clinical point of view, but which anatomical pathologists class as multilocular cysts. 4. When the cyst is multilocular, and when the cystic walls are clothed with vegetation, the results are very different. The tumour tends constantly to relapse, the abdominal fistula persists, and the interminable suppuration exposes the patient to chronic septicæmia and exhaustion. 5. Finally, it is to be noted, both in the case of young and of multilocular cysts, that there is a possibility of the rapid development of a tumour already pre-existing on the ovary, which has not been touched, and of which the conditions could not be verified at the time of operation.

NEUROLOGY AND PSYCHOLOGY.

RECENT PAPERS.

1. STEWART, GRAINGER.—On Paralysis of Hands and Feet from Disease of Nerves. (*Trans. of Medico-Chir. Soc. of Edinb.*, March 1881.)

2. HAMMOND.—On Thalamic Epilepsy. (*Neurological Contributions*, No. 3.)

3. HAMMOND.—On Myxœdema, with Special Reference to its Cerebral and Nervous Symptoms. (*Ibid.*)

4. HAMMOND.—On the Therapeutic Use of the Magnet. (*Ibid.*)

5. HAMMOND.—On Obscure Abscesses of the Liver, their Association with Hypochondria and other forms of Mental Derangement, and their Treatment. (*Ibid.*)

6. WRENCH, E. M.—The Effect of a Fixed Idea. (*Lancet*, Jan. 1880.)

7. TUKE, D. HACK.—Intemperance in Study. (*Jour. of Mental Science*, Jan. 1880.)

8. SHAW, J. C.—On Tendon-Reflex in the Insane.

1. *Stewart on Paralysis of Hands and Feet from Disease of Nerves.*—In a paper read before the Medico-Chirurgical Society of Edinburgh, on March 2nd, 1881, Dr. Grainger Stewart has called attention to a form of paralysis, of which hitherto little has been known. He describes three cases of what he named peripheral paralysis; and, in one instance, he was enabled to verify his diagnosis by *post mortem* examination. In his own words, the clinical characters of this disease are 'the co-existence of symptoms referable to the sensory, the motor, and the trophic functions of the nerves; the localisation of the symptoms in the feet and hands, the intensity being greatest at the most distal points, and the affection corresponding to certain districts of the extremities, and not to the distribution-areas of particular nerves'. He remarks that such symptoms cannot be referred to disease, either of the brain or of the spinal cord; and hence he infers, by a process of exclusion, that the nerves themselves are involved. In the fatal case, the median, ulnar, and tibial nerves were particularly affected. Microscopically, it was found that certain bundles of nerve-fibres had undergone what appeared to be fatty degeneration. The axis-cylinder was swollen, and presented a number of rounded masses resembling colloid bodies in every respect. In some instances, these bodies had undergone fatty degeneration, and the result was the formation of compound granular corpuscles. Some of the nerve-fibres were completely destroyed, and were replaced simply by fibrous tissue. Secondary degeneration of the columns of Goll and of the direct cerebellar tracts was observed in the cord. Dr. Grainger Stewart thinks that the change could not possibly have arisen in the muscles, since the sensory disorders preceded the motor. Unfortunately, he is unable to give any precise information regarding the nerve-endings, but he strongly inclines to the belief that the disease originated there, and spread upwards. From the fact that the disease begins simultaneously, or nearly so, in both hands and feet, it seems probable that the affection depends on some constitutional cause. After noticing the few cases of this disease on record, Dr. Stewart proceeds to give a summary of its clinical features. The commencement is usually acute, and attended by more or less pyrexia. The first changes occur in the sensory functions. Sometimes there is acute pain, but more frequently numbness or tingling in the affected parts, and, at the same time, more or less anæsthesia. These sensory disorders occur usually in both hands and feet simultaneously. Paresis affects the most distal parts at first, and then extends up the limb from one group of muscles to another. In rare cases, the normal functions of the bladder and rectum are interfered with. The skin-reflexes are sometimes absent, but are present to an exaggerated extent on the application of a strong stimulus. The patellar reflex is usually lost at an early stage, but ankle-clonus may be present even when the 'knee-jerk' is absent. Voluntary motion rapidly diminishes, the patient at the end of a week often being unable to flex or extend the toes and fingers. There is no marked loss of co-ordinating power. Trophic changes are indicated by the rapid muscular atrophy, by congestion and glossiness of skin, by malnutrition of the nails, and by some degree of œdema. The progress of the disease is towards recovery, but there is a marked tendency to recurrence. It is probable that many cases, which were formerly ascribed to spinal congestion and myelitis, are really

dependent on a similar change to the one now described. This disease resembles Landry's acute ascending paralysis; but in this latter affection the motor functions only are involved and no marked pathological change has been noted. It may be, however, that these processes are related. Dr. Grainger Stewart suggests that the premonitory, but transitory, attacks of paralysis, involving certain nerves in locomotor ataxy, may be explained by assuming them to be due to peripheral disease. Dr. Hamilton's pathological researches have led to the same conclusion, and a further corroboration is afforded by the beneficial results of nerve-stretching. As regards treatment, ergot of rye has been found useful in the early stages; and strychnia, with friction, electricity, and exercise, when the acute period has passed. [It is interesting to observe, that M. Charcot, in his *Leçons sur les Localisations dans les Maladies du Cerveau et de la Moëlle Epinière*, pp. 261-262, suggests that secondary spinal degeneration will doubtless be found, in some cases, to be dependent on lesion of the peripheral nerves. He was then acquainted with only three or four cases of this kind. In all, the lesion was situated external to the cord, on the roots of the cauda equina. In the lumbar region, the whole posterior column was degenerated, but higher up the columns of Goll alone were affected.—*Rep.*]

2. *Hammond on Thalamic Epilepsy.*—Dr. Hammond (*Neurological Contributions*, No. 3) narrates some cases, the prominent symptoms of which were hallucinations followed by loss of consciousness. On physiological and pathological grounds, he infers that the seat of this form of epilepsy is in the optic thalami, and ascribes the loss of consciousness, which he believes to be an essential element of epilepsy, to extension of the disorder to the cortex. Muscular spasm was absent in all the cases.

3. *Hammond on Myxœdema, with special reference to its Cerebral and Nervous Symptoms.*—In a paper read before the American Neurological Association, June 16, 1880 (*Neurological Contributions*, No. 3), Dr. Hammond, after giving a typical case of this disease, criticises the opinions of various observers, and concludes that the phenomena of myxœdema are the result both of central and of peripheral changes.

4. *Hammond on the Therapeutic Use of the Magnet.*—In two out of nine cases of chorea in which the magnet was used (*Neurological Contributions*, No. 3), a complete cure was effected in a few minutes. One patient, who had lost the power of speech, regained it after half-an-hour's application of two horse-shoe magnets; one being placed over the cervico-dorsal region of the spine, the other over the front of the sternum.

5. *Hammond on Obscure Abscesses of the Liver, and their Association with Mental Derangement.*—The first part of this paper (*Neurological Contributions*, No. 3) was originally published in the *St. Louis Clinical Record* for June 1878, and the second part, giving additional observations, was read before the New York Neurological Society, June 3, 1878. Dr. Hammond believes that there is a marked association between mental depression, amounting in many cases to distinct hypochondria, and hepatic abscesses, which are generally unconnected with dysentery and multiple in the same patient. He believes that such abscesses are much more common than is usually supposed, and that they frequently exist without local symptoms. He advises that they should be aspirated as early as possible, and before adhesions are formed. Altogether, he has tapped the liver forty-three times for abscesses connected with hypochondria, and has been successful in obtaining pus in fifteen of the cases. Dr. Hammond thinks that these hepatic abscesses are secondary to the cerebral disturbance, and brings forward experimental, physiological, and pathological facts in favour of his opinion. He remarks that no doubt the mental symptoms become intensified and modified by the presence of the abscesses.

W. B. Hadden, M.D.

6. *Wrench on the Effects of a Fixed Idea.*—Mr. E. M. Wrench of Baslow describes this case in the *Lancet*, January 1880, p. 71. A gentleman, away from home, suddenly, while dressing, found his mouth and nose full of blood, and, at the same time, became conscious that his lower false teeth, which he seldom removed at night, were missing. He fancied that he felt them in the pharynx, and sent anxiously for surgical aid. Examination failed to detect any foreign body; still the patient persisted in saying he had swallowed them, and complained of intense pain if the region near the hyoid bone was touched with a probang, asserting that the teeth were there. Finding that the patient could swallow fluids, Mr. Wrench instituted a search for the teeth, and, fortunately, they were found on the top of a chest of drawers. All symptoms immediately vanished, and the patient dressed and ate an excellent lunch.

Richard Neale, M.D.

7. *Tuke on Intemperance in Study.*—In this paper (*Journal of Mental Science*, Jan. 1880), Dr. Hack Tuke draws special attention to the ill effects which frequently follow excessive mental strain in young persons of both sexes. He points out that the time tables of educational institutions give no correct idea of the number of hours' work required by the pupils, as a large quantity of work has always to be done during the time which is apparently set apart for recreation and healthful exercise. The system presses most hardly, of course, upon those who work most conscientiously; and the custom of requiring the same tasks of all pupils alike, without reference to their varying capacities for acquiring knowledge, is most harmful. Dr. Andrew Clark reports that, of the young men passing the Indian Civil Service Examination, and afterwards sent to him for health-certificates, ten per cent., during the last three years, have had temporary albuminuria. Dr. Tuke discusses at some length the present system of medical education; he expresses the conviction that its effect upon the mind is injurious, and thus supports the views of others who hold that it fails to produce the best men, and is altogether unreasonable.

C. S. W. Cobbold, M.D.

8. *Shaw on Tendon-Reflex in the Insane.*—Dr. J. C. Shaw devotes a short article to this subject in the *American Archives of Medicine*, August 1879. He has examined 130 cases. In ten of very decided general paralysis, the tendon-reflex was entirely absent; in a fourth it was exceedingly slight. In all these there was decided ataxia. Tendon-reflex is always present in the early stages. In one case in which there were very decided difficulty of walking and slowness of speech, the tendon-reflex was present. In fifteen cases of various forms of mental disorders, it was absent. Some were cases of dementia, others of senile insanity. In twenty-nine others of all sorts it was slight, and in seventy-six it was normal. Westphal's opinion is referred to, that, whenever tendon-reflex is absent, the diagnosis of degeneration of the posterior fibres of the spinal

cord can be made, and a case is recorded in support of it. A male, aged 27, was admitted with excitement and delusions of wealth and greatness. He was feeble and ataxic in speech and gait. A meningitis of the cord was found with cortical sclerosis, and the latter was more pronounced in the posterior fissure, columns, and roots. Dr. Shaw believes that, in fifteen cases of dementia he has seen, in which the tendon-reflex was absent, there was a cortical sclerosis with chronic spinal meningitis; and the cord of a case of chronic mania is figured in which such a condition is represented.

J. F. GOODHART, M.D.

DERMATOLOGY.

RECENT PAPERS.

1. RENAUT, J.—On Prepustulation and Pustulation in Variola. (*Annales de Dermatologie et de Syphiligraphie*, 2me Série, vol. ii, No. 1.)

2. AUBERT, P.—On the Diagnosis of Favus. (*Ibid.*)

3. SPILLMANN, PAUL.—Contribution to the History of Acute Pemphigus. (*Ibid.*)

4. LOEWENBERG, M.—On the Rôle of Micro-organisms in Auricular Furuncles, and on Furunculosis in general. (*Courrier Médical*, Oct. 9, 1880.)

5. TRASTOUR, E.—On the Contagion of Furunculosis. (*Courrier Médical*, Nov. 27, 1880.)

6. UNNA, P. G.—On the Treatment of Eczema by Muslin imbued with Ointment. (*Berlin. Klin. Woch.*, No. 35, 1880.)

7. GAUCHER, ERNEST.—On the Pathological Anatomy of Eczema. (*Ann. de Derm. et de Syphilig.*, 2me Série, vol. ii, No. 2.)

8. CHANDELUX and REBATEL.—Histological Examination in a Case of Lupus of the Face. (*Ibid.*)

9. LELOIR, HENRI.—On the Formation of Pustules and Vesicles in the Skin and Mucous Membranes. (*Arch. de Phys.*, 1880, p. 307.)

10. KAUFMANN, C.—Urticaria after Tinctura Pimpinellæ. (*Berlin. Klin. Woch.*, No. 8, 1881.)

11. GREENOUGH, F. B.—On Herpes Progenitalis. (*Arch. of Derm.*, No. 1, 1881.)

12. GRAHAM, J. E.—A Case of Scleroderma. (*Ibid.*)

13. DUHRING, LOUIS A.—Pityriasis Maculata et Circinata. (*Amer. Jour. of the Med. Sci.*, Oct. 1880.)

14. CLARK, ALONZO.—Date of Small-pox Contagion. (*New York Med. Record*, May 1, 1880.)

15. SMITH, WALTER G.—Two Cases of Fragilitas Crinium. (*Arch. of Derm.*, No. 2, 1881.)

16. HEITZMANN, C.—Experiments on Epilation. (*Ibid.*)

17. BULKLEY, L. DUNCAN.—Case of Lichen Planus in which the Eruption first appeared on the Glans Penis. (*Ibid.*)

18. HEPPEL, C.—On a New Abortive Treatment of Erysipelas. (*Ibid.*)

19. WÖLFLER. A Case of Onychogryphosis following Injury to the Forearm. (*Wien. Med. Woch.*, No. 2, 1881, p. 43.)

20. RIEGEL.—On Impetigo Contagiosa. (*Berlin. Klin. Woch.*, March 28, 1881, p. 79.)

21. LAUDON.—A Peculiar Disease of the Skin. (*Berlin. Klin. Woch.*, Jan. 12, 1880, p. 23.)

22. VOSS.—On the Treatment of Psoriasis by Baths of Bichloride of Mercury. (*St. Petersb. Med. Woch.*, 1880, No. 44.)

23. UNNA.—On the Cause of the Black Points in Comedones. (*Virchow's Arch.*, Vol. 82, Heft 1, 1880.)

24. SMITH, WALTER G.—On Herpes (Hydroa) Gestationis. (*Dub. Med. Jour.*, Jan. 1881.)

25. FORREST, ROBERT W.—Case of Cancer of the Mamma in the Male, preceded by so-called Eczema of the Mammary Areola. (*Glas. Med. Jour.*, Dec. 1880.)

26. DENSLOW.—On the Etiology and Treatment of Acne. (*New York Med. Jour.*, Feb. 1881.)

27. RIGAL and CORNIL.—A Case of Acute Purpura Hæmorrhagica. (*Séances de la Société Médicale des Hôpitaux de Paris*, Feb. 28 and March 28, 1879.)

28. NICHOLLS, H. A. ALFORD.—Fourth Report of the Superintendent of the Yaws Hospitals.

29. BULKLEY.—A New Method of Depilation. (*New York Med. Rec.*, July 1881.)

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1. *Renaut on Pustulation and Prepustulation in Variola.*—Professor Renaut (*Ann. de Derm. et de Syphil.* 2me série, vol. ii, No. 1) thus summarises the results of his researches into the anatomical changes which characterise the formation of pustules in variola. 1. There is the stage of papulation, characterised by congestive tumefaction of the skin—slight serous œdema of the cutis. 2. The stage of prepustulation is characterised by swelling and opacity of the deep layers of the rete mucosum, the development of a parasitic spheroid, the transition-changes preceding the formation of the vesicle in the superficial and lateral strata of the rete, and the formation of a reticulum. 3. The stage of vesiculation is characterised by the entrance of blood-plasma, filtered of its white and red corpuscles, into the reticulum which has been already formed. 4. The stage of pustulation is characterised by destruction of the deepest layer of the cells of the rete, congestive and inflammatory infiltration of the cutis, the entrance of plasma charged with white blood-corpuscles into the reticulum, and the purulent transformation of these cells. 5. The stage of cicatrisation is characterised by growth of the cutis where it has been denuded, and the formation of a new tissue to replace that which has been destroyed, and of stratified layers of the epidermis which remain always flat, that is to say, not exactly reproducing the papillary body (depressed cicatrix.)

2. *Aubert on the Diagnosis of Favus.*—Aubert (*Ann. de Derm. et de Syphil.*, 2me série, vol. ii, No. 1) has found that, in cases in which the diagnosis of favus is difficult, a sure diagnostic point may be found in an effect of the breaking up of the hair by the parasite. The hair-shaft becomes infiltrated with air, and when looked at by transmitted light under a low power is opaque and dark, but when looked at under reflected light, it shines and shows a brilliant striation.

3. *Spillmann on the History of Acute Pemphigus.*—The author (*Ann. de Derm. et de Syphil.*, 2me série, vol. ii, No. 1) relates a fatal case of acute pemphigus, occurring in a previously healthy woman, aged 36, in which, after severe rigors, the eruption began to show itself in twenty-four hours. On the fourth day there was hæmatemesis. The patient died at the end of the second week of her illness. In the fluid of the bullæ during life, and in the blood after death, a great number of moving rods were found, 'resembling those found in puerperal fever, but shorter'.

4. *Loewenberg on Furunculosis.*—The author (*Ann. de Derm. et de Syphil.*, 2me série, vol. ii, No. 1) having found in boils occurring in the auditory canal the micro-organism found by Pasteur in boils on other parts of the body, recommends treatment by laying open the boil, and applying lotions of thymic or boracic acid. In general furunculosis, he recommends applications of the same lotions to the whole body.

5. *Trastour on the Contagion of Furunculosis.*—M. Trastour relates (*Ann. de Derm. et de Syphil.*,

2me série, vol. ii, No. 1) a case in which four persons, who attended to a patient suffering from a boil, became themselves affected with boils. A fifth, who assisted in the nursing, but who was careful not to touch the wound or the dressings, escaped.

6. *Unna on the Treatment of Eczema by Muslin imbued with Ointment.*—Unna (*Berl. Klin. Woch.*, No. 35, 1880) recommends a new method of applying ointments. Unstarched muslin is soaked in the melted ointment, by which it becomes saturated. When dry, it is cut into pieces, as required, and when applied, it is kept in position by a bandage.

7. *Gaucher on the Pathological Anatomy of Eczema.*—A man, aged 55 (*Ann. de Derm. et de Syphil.*, 2me série, vol. ii, No. 2), became affected with disseminated eczema of the face and limbs. He applied a carbolic acid lotion, which aggravated the disease into an acute and generalised eczema. When he entered the St. Louis Hospital, not only his whole body was affected, but the disease had invaded the lips and mucous membrane of the tongue. The skin was red, swollen, hot, painful, and covered with yellow crusts. The patient died a month after his admission into the hospital, and two months after the first outbreak of the disease. The changes found, on microscopical examination, were, in the author's words, as follows : *a*, congestion of the papillary blood-vessels, and embryonic infiltration of the cutis, and of the papillæ ; *b*, vesicular transformation of the cells of the rete Malpighii, and total destruction of the centre of some interpapillary columns ; *c*, partial loosening of the epidermis from the corium ; *d*, ulcerations.

8. *Chandelux and Rebatel on the Histological Examination in a case of Lupus of the Face.*—The authors (*Ann. de Derm. et de Syphil.*, 2me série, vol. ii, No. 2) describe the now well-known characters of lupus-tissue, and, on the strength of the anatomical changes, adhere to the opinions of Friedländer, Köster, and others, to the effect that lupus is tuberculosis of the cutis.

9. *Leloir on the Formation of Pustules and Vesicles in the Skin and Mucous Membranes.*—Leloir (*Arch. de Physiol.*, 1880, p. 307) finds that the first changes which lead to the formation of vesicles and pustules in the skin, take place in the rete mucosum and in the layer of granular cells. Changes in the individual cells lead to dilatation and destruction of the distended cell-walls at the points of contact ; and small cavities are thus formed in the epidermis, which finally become filled with white blood-corpuscles (pus) from the blood-vessels of the papillary layer. The irritating agents that lead to the destruction of the epidermic cells are to be found in the blood and lymph of this layer. These penetrate the epidermis from below, and act in a manner analogous to that which follows the application of irritating substances, such as croton-oil, to the surface of the skin.

11. *Greenough on Herpes Progenitalis.*—Greenough (*Arch. of Derm.*, No. 1) finds that the parts of the penis most likely to be affected are in the following order : the sulcus, the reflected mucous membrane of the prepuce, the glans, the margin or edge of the prepuce, and the skin of the shaft. He regards the disease as being *sui generis*, and believes that in the early stages it is impossible to distinguish it from chancroid. For treatment, he recommends dilute liquor plumbi subacetatis applied on a piece of soft linen or absorbent cotton. If the abrasures be indolent, he uses an ointment made with vaseline or cosmoline, balsam of Peru, and iodoform, in the proportion of a drachm to the ounce. [The reporter recommends, with confidence, the use of dry boracic lint, for the first suggestion of which he is indebted to a London surgeon. Patients liable to this troublesome affection, to whom it is recommended, will, as he can testify from experience, have reason to be grateful for the advice.—*Rep.*]

12. *Graham on a case of Scleroderma.*—The patient (*Arch. of Derm.*, No. 1, 1881), a girl, aged 18, suffered from scleroderma for about a year. A considerable extent of surface was involved. The principal remedies used were iodide of potassium, strychnine, phosphates, and arsenic, the most rapid improvement taking place whilst she was taking the iodide.

13. *Duhring on Pityriasis Maculata et Circinata.*—Dr. Duhring, in a paper (*Amer. Jour. of the Med. Sciences*, Oct. 1880—see also *Arch. of Derm.*, No. 1, 1881) read before the American Dermatological Association, remarked that although Bazin described this disorder under the title of '*pityriasis rubra aigüe*', with two varieties, '*maculata et circinata*', it had yet apparently escaped the observation of English, American, and German observers. The author gives in his paper the clinical histories of six cases. The course of the disease is generally as follows. 'The patient, while nearly or quite in usual health, discovers by accident, or it is revealed by slight itching, circumscribed erythematous patches upon the body or extremities. These patches, which are not scaly nor infiltrated, gradually extend over the body, making the surface a dull-red or violet colour, the hands and feet generally escaping ; subsequently there is always more or less furfuraceous desquamation. The itching usually runs its course in from four to twelve weeks, with more or less pigmentation. The itching in some cases is a prominent symptom.' The disorder has been described by Hardy as 'pityriasis circinée'.

14. *Clark on the Date of Small-pox Contagion.*—The author (*New York Med. Record*, May 1, 1880) states that his experience goes to show that, up to the time of the umbilication of the variolous pustule, there are no emanations from the body that will convey small-pox to another person.

15. *Smith on Two Cases of Fragilitas Crinium.*—Dr. Walter Smith (*Arch. of Derm.*, No. 2, 1881) observed in a young medical man an affection of the hairs of the moustache, with minute pustules or abscesses on the right side of the lip. The hairs broke off short. Most of the larger hairs appeared as if cut off at the ends, and some were tipped with a black nob. Another young medical man, who used the hair-brush of this patient to brush his moustache, had the hairs of the moustache similarly affected. In the course of a week the affection had spread considerably, and the right half of the moustache appeared as if it had been clipped. In fact, the two cases were evidently samples of the same disease of the hairs. The second case, which was kept under observation, got well whilst an application of vaseline and oil was being used. Dr. Smith could not detect evidence of trichophytosis, but remarks that in the hairs of one of the patients two skilled microscopists believed that they detected the presence of a fungus. [A disease of the hair conveyed from one patient to another by a brush must have been contagious, and the contagious substance could surely have only been a fungus.—*Rep.*]

16. *Heitzmann on Epilation.*—Heitzmann (*Arch. of Derm.*, No. 2, 1881) made experiments on the hairs of his arm, in order to ascertain whether it is

possible to discover a practicable method of destroying superfluous hairs. He injected into the hair-follicle, with the intention of destroying the papilla, tincture of iodine, carbonate of potash, and solutions of caustic potash in six, five, and four parts of water. He found that caustic potash diluted with four parts of water is, on being introduced to the bottom of the hair-follicle, capable of destroying the papilla of the hair under the symptoms of suppuration. A very fine instrument is used for the purpose. [The symptoms of irritation and inflammation which are described as following the operation, will hardly encourage practitioners to urge on their patients this means of getting rid of disfiguring hairs. Dr. Heitzmann's paper was read before the American Dermatological Association, and, in the discussion which followed (*Ibid.* p. 177), several of the members remarked that they had obtained satisfactory results from Dr. Hardaway's method of destroying the hair-papilla by electrolysis.—*Rep.*]

17. *Bulkeley on a Case of Lichen Planus, in which the Eruption began on the Glans Penis.*—When the patient (*Arch. of Derm.*, No. 2, 1881) was first seen, the glans penis was the seat of several patches of pinkish purplish colour, evidently composed of smaller spots aggregated together, with also a few pin-head spots around. They were all similar in appearance, flat on the summit, very slightly elevated and without a particle of induration ; the surface was smooth, without desquamation ; there was no balanitis. The diagnosis was cleared up by the subsequent development of the eruption of lichen planus on the body. The eruption on the penis appeared three months before its development elsewhere ; it disappeared from the penis about three months before it vanished from the other parts.

18. *Heppel on a New Abortive Treatment of Erysipelas.*—Heppel states (*Arch. of Derm.*, No. 2, 1881) that in seven cases the spread of erysipelas was arrested by brushing the boundary line and the parts extending a finger's width on each side of it with a ten per cent. alcoholic solution of carbolic acid, until the integument thus painted showed a decided discoloration.

19. *Wölfler on a Case of Onychogryphosis following Injury to the Forearm.*—Wölfler (*Wien. Med. Wochensch.*, No. 2, 1881) exhibited to the Medical Society of Vienna a man, who seven years previously had suffered from compound fracture of the bones of the right forearm. On account of secondary hæmorrhage, the brachial artery, and later the axillary, required ligature. It was nine months before complete recovery took place, and during this time the arm had been kept almost motionless. Three years afterwards, the nails began to assume an abnormal appearance ; and when the case was shown to the Society they were thick, furrowed, and twisted like a ram's horn. Dr. Wölfler pointed out that the change did not consist in a mere increase in the quantity of nail-substance, but that the quality was altered. Professor Billroth remarked that it was not clear in what the evident disturbance of nutrition consisted. The sensibility was natural in all parts of the hand, and the radial pulse was perfectly good.

21. *Laudon on a Peculiar Disease of the Skin.*—Dr. Laudon (*Berlin Klin. Wochensch.*, Jan. 12, 1880, p. 23) relates two cases in which, after chill, localised swellings appeared from time to time on different parts of the body for periods of about ten weeks. The swollen parts were deep red in colour, and the condition rapidly disappeared. In one of the cases, the first attack was accompanied with acute pharyngitis of the left side, which disappeared in one night after an emetic had been taken. The author believes the cause of the disease to be spinal irritation produced by cold.

22. *Voss on the Treatment of Psoriasis by Baths of Bichloride of Mercury.*—Voss had found mercurial baths successful in removing the disease in five cases of inveterate psoriasis. He prescribes a daily bath in which the patient remains 30 to 40 minutes. In one case a cure was effected by 46, in another by 32, in another by 40, in another by 48 baths. In the fifth case the patient was under treatment when the author wrote.

23. *Unna on the Cause of the Black Points in Comedones.*—Unna (Virchow's *Arch.*, Band lxxxii, Heft 1) believes that the generally accepted idea that the black point of a comedo is due to dirt is a mistake. He attributes it to a pigmentary change in the cells of the horny layer of the epidermis. He has found the most successful treatment to be the application of dilute acids. All applications containing alkalies should be avoided.

24. *Smith on Herpes (Hydroa) Gestationis.*—Dr. Walter Smith (*Dub. Med. Jour.*, Jan. 1881) relates another case of this rare, but now sufficiently described, affection. The patient had two attacks during different pregnancies. The first attack occurred when she was six months pregnant of her third child ; the second when three months pregnant of her seventh child.

25. *Forrest on a Case of Cancer of the Mamma in the Male, preceded by so-called Eczema of the Mammary Gland.*—Dr. Forrest (*Glas. Med. Jour.*, Dec. 1880) reports a case in which, in a man aged 72, an affection, 'a leakage', on one side of the nipple preceded the development of cancer of the breast. This is the first case of the kind recorded in the male subject.

27. *Rigal and Cornil on a Case of Acute Purpura Hæmorrhagica.*—MM. Rigal and Cornil read before the Société Médicale des Hôpitaux de Paris (meetings of Feb. 28 and March 28, 1879) the clinical history and results of a minute histological examination in a fatal case of purpura hæmorrhagica complicating heart-disease. Their conclusions are these. 1. In serious cases, purpura hæmorrhagica is a complex symptomatic condition, is fundamentally constituted by cutaneous and mucous hæmorrhages, and by a progressive debility resulting from an exhaustion of the nervous system, which is not always in proportion to the amount of hæmorrhage. 2. Whatever the conditions which have given rise to purpura hæmorrhagica may be, it is impossible to understand the production of the hæmorrhages, without supposing that there is trouble in the innervation of the vascular wall ; this trouble may be either a stimulation of the sympathetic filaments, or a diminution in the action of the vaso-motor centres. The changes in the blood and the lesions of the vascular walls appear to be variable and inconstant ; although their great influence cannot be denied, they seem to be insufficient to produce purpura hæmorrhagica apart from nervous disturbance. 3. In the course of chronic maladies, particularly in the course of an affection of the heart, an acute purpura hæmorrhagica running a rapid course may supervene, before the establishment of an appreciable cachectic condition. The vascular lesion at the points of ecchymosis may consist of nothing more than simple dilatation of the arterioles of the cutis. 4. In future observations, the differential diagnosis should be made with rigorous accuracy; and cases of hæmorrhagic variola, scurvy, and

hæmophilia, should be carefully separated from true purpura hæmorrhagica.

28. *Nicholls on Yaws.*--In an appendix to the *Fourth Report of the Superintendent of Yaws Hospitals* (p. 23) the symptoms presented in a few cases of the disease are described. 1. In a woman 40 years of age, there were large reniform encrusted tubercles at the right angle of the mouth, with papules on both arms, and squamæ on both hands. There were cicatrices about the limbs, and the disease had lasted two years. Twenty-two weeks later, the same patient had small tubercles on the mucous membrane of the lip, and a squamous eruption over the body, and the old ulcer on the leg had broken out again. 2. A girl, aged 3 years, had encrusted tubercles on the face, abdomen, buttocks, pudenda, and perinæum. About a year afterwards, in a second attack, there were encrusted tubercles on the face, scalp, trunk, arms, and the perinæum. There were also many maculæ about the body and limbs. 3. A boy, aged 8 years, had encrusted tubercles on the chin and left knee, and squamæ on the body and limbs. 4. A boy, aged 9 years, had a large partially encrusted tubercular mass on the inner side of the left foot; he had also onychia of the left thumb, and maculæ on the body and limbs. After being free from disease for eight months, he was again seen with small ulcers round the left internal malleolus and encrusted tubercle above the left heel, and small encrusted tubercles on the face. [Science is indebted to Dr. Nicholls for the details of these cases. What is most urgently required in reference to the affection known as yaws, is a full clinical history of a large number of cases, and a few coloured drawings showing the appearances considered characteristic. —*Rep.*] G. Thin, M.D.

29. *Bulkley on a New Method of Depilation.*—A new method of depilation, recommended by Dr. L. Duncan Bulkley, for favus, is by using the following preparation (*New York Med. Record*, July 1881): ℞ Ceræ flavæ, ʒ iij; laccæ in tabulis, ʒ iv; resinæ, ʒ vi; picis Burgundicæ, ʒ x; gummi dammar, ʒ jss. This is made into sticks of different sizes. The end is heated until soft, and then applied to the diseased scalp, the hair having been cut short. As soon as the wax is cool it is carefully withdrawn, bringing away the diseased hairs. The head is then washed with a lotion of bichloride of mercury, gr. iv. to ℥j. Dr. Bulkley considers depilation quite essential in favus, a view not held by all.

OTOLOGY.

RECENT PAPERS.

1. Spencer, H. N.—A Case of Aneurism of the Middle Meningeal Artery from Injury. (*Trans. of the Amer. Otol. Soc.*, 1880.)

2. Green, J. Orne. — Case of Osteosclerosis of the Mastoid Bone. (*Ibid.*)

3. Kipp, C. J.—On the Ear-Affections of Inherited Syphilis. (*Ibid.*)

4. Kipp, C. J.—On Branchial Fistulæ at the External Ear. (*Ibid.*)

5. Knapp, H.—Some Remarks and Observations on Bone Conduction. (*Ibid.*)

6. Weber-Liel.—On Auditory Vertigo. (*Monats. für Ohrenheilk.*, Nov. 1880.)

7. Voltolini, R.—On the Pathologico-Anatomical Examination of the Ear, especially of the Labyrinth. (*Ibid.*)

8. Voltolini, R.—On Aural Polypi and their Treatment. (*Ibid.*, Feb. 1881.)

9. Michael, J.—Employment of Nitrite of Amyl in Diseases of the Ear. (*Annal. des Mal. de l'Oreille, etc.* March 1881.)

10. Brown, F. H.—Impacted Foreign Bodies in the External Auditory Meatus. (*Amer. Jour. of Otology*, vol. iii.)

11. Schwartze. — A Case of Profuse Discharge of Cerebro-Spinal Fluid and Symptoms of Cerebral Hyperæmia from the thrusting of a Knitting-Needle into the Ear. (*Archiv. für Ohrenheilk.*, Band xvii.)

1. *Spencer on Aneurism of the Middle Meningeal Artery from Injury.*—Dr. Spencer (*Trans. of the Amer. Otolog. Soc.*, 1880) relates a case of supposed aneurism of the middle meningeal artery, the result of a gun-shot wound. The ball 'entered on the left side of the head, at a point three-quarters of an inch below, and seven-eighths of an inch in front, measured from a central point, on the floor of the meatus, at its external orifice, and emerged on the opposite side of the head, just in front of the tragus, central with the external auditory canal'. When seen about seventeen months after the injury, there was considerable deafness of both ears. As this, however, did not come on till some weeks after the accident, and improved under treatment, the author ascribes it to chronic catarrh of the middle ear, the result of exposure to cold after the accident. Three or four days after the accident, a noise synchronous with the pulse, at first feeble, but afterwards increasing in intensity, made its appearance. It could be plainly heard by the surgeon through the diagnostic tube inserted into the left meatus. The author considers that the ball must have passed against the posterior surface of the middle meningeal artery, a little below its point of entrance, into the foramen spinosum, on a level with the union of the atlas and axis, only obliquely, and must have passed through the tissues of the posterior wall of the pharynx.

2. *Green on Osteosclerosis of the Mastoid Bone.*—In a paper published in the *Trans. of the Amer. Otolog. Soc.* for 1880, Dr. O. Green adds three cases to those already recorded by him of hyperostosis of the mastoid. In Cases I and II reported in this paper, there was distinct prominence of the temporal bone; on both sides in the first case, on one side only in the latter. In Cases I and III, the mastoid bone was perforated without reaching the cells, but with decided relief from the severe pain for which the operation was undertaken. In Case II the operation was not undertaken, on account of the patient's pregnancy. The author's later experience on this subject is confirmatory of the favourable effect of the operation, although he does not favour surgical interference until other measures have failed. His views agree on the whole with those of Hartmann (see London Medical Record, May 15, 1880). In the discussion which followed the reading of Dr. Green's paper, Dr. Agnew, who had twice trephined where he found this eburnation of the mastoid cells, suggested that the ether administered during the operation might have something to do with the cure of the patient, and mentioned a case of severe neuralgia of the mastoid greatly improved by large doses of whiskey.

3. *Kipp on the Ear-Affections of Inherited Syphilis.*—This paper (*Ibid.*) consists of a record of six cases of affection of the internal ears or acoustic nerves in females from six to twenty-three years of age. They present nothing peculiar, except that in several bone-conduction was noted as satisfactory or

good, which the author attributes to the patients mistaking vibration for sound. Treatment was of little benefit except in one case, although several of the patients lived in comfortable houses, and had a sufficiency of wholesome food. Mercury was administered only in one case; iodide of potassium in all. In all the cases except one, keratitis had existed in both eyes before the ears were affected. In the discussion on this paper, Dr. Knapp considered that for treatment mercury was infinitely better than iodide of potassium. Dr. Agnew advised the heroic use of mercury, so as to get its full effect in forty-eight hours or three days by inunction. Dr. Sexton adhered to his previously published opinion that in cases of this description the chief lesion is in the middle ear.

4. *Kipp on Branchial Fistulæ at the External Ear.*—Dr. Kipp (*Ibid.*) has met with six individuals in whom this anomaly, or a depression in the skin corresponding to the usual seat of the orifice of the fistulæ, was present. In five of these, a fistulous canal, into which a fine probe could be passed in a downward, forward, and inward direction, for a distance of from 3 to 10 millimètres, was present on the helix, about a centimètre above the upper end of the tragus. In three cases it was bilateral, in two unilateral. In none of the cases was it possible to demonstrate a connection between the fistula and the external auditory canal, or tympanic cavity. Three of the cases are surgically of interest, on account of cysts being connected with the fistulæ. The author's experience in the treatment of these cases shows that incision and cauterisation of the cysts are not at all reliable, and should not be resorted to if extirpation is at all practicable.

5. *Knapp on Bone-Conduction.* — In some interesting remarks on this subject (*Ibid.*), in which the author urges some physiological analogies between the eye and the ear, he gives his opinion that direct bone-conduction does exist, but produces only quantitative perception of sound, not useful hearing. For the qualitative perception of sound, *i.e.*, the discrimination of articulate speech and musical (in particular clang tint, melody and harmony), the author considers that the integrity of the sound receiving and conducting apparatus of the middle ear, especially the mechanism of the stapes, is indispensable. In support of this, he mentions three observations. 1. He has never met with a person who could hear his (Dr. Knapp's) watch (hearing distance=24 inches) from the mastoid process, temple, or other parts, if he could not hear it on application to the ear. 2. The author has had patients with acute and chronic diseases of the middle ear, who could hear the watch only on application to the auricle or not at all, who, after the drumhead had been punctured and the ear treated by Politzer's method, could hear the watch distinctly, not only on application to the auricle, but also from the mastoid, temple, etc. 3. The author has never met with a person who was benefited more by the audiphone than by a trumpet. In the discussion which followed, Drs. Andrews and Pomeroy explained the phenomena of intermittent bone-conduction (see above, observation 2) by pressure exerted on the fenestra ovalis, interrupting the functions of the labyrinth. Dr. Blake agreed with Dr. Knapp as to the importance of the subject, and the necessity for a thorough investigation of the same.

8. *Voltolini on Aural Polypi and their Treatment.* —In the *Monats. für Ohrenh.* for Feb. 1881, Prof. Voltolini makes some remarks on this subject. With regard to the etiology, he thinks that any irritation whatsoever in the meatus may produce a growth of polypi. Any otorrhœa can also give rise to these growths, but a certain predisposition appears to be necessary for their occurrence. In regard to prognosis, the author lays great stress on the sensitiveness of the growths. When benign in character, they are not sensitive, and excite very little pain when pulled upon; when, on the other hand, they are very painful on being touched, the prognosis is bad, and a deeper affection (*e.g.*, of the bone) may be diagnosed. He relates two cases in which the polypi were excessively tender to the touch; both cases terminated fatally, the one from violent hæmorrhage from the ear, the other from meningitis, a *post mortem* examination showing disease of bone in the tympanum and abscess in the cerebellum. Mentioning the use of alcohol, as recommended by Politzer for causing shrinking of polypi (*vide* LONDON MEDICAL RECORD, Jan. 1881), the author considers that if employed for months its use might become dangerous, owing to the perpetual abstraction of water from the tissues. In the treatment, the author removes the growth by means of a fine snare of steel wire passed round it. If it be too resistent to be cut off with the cold snare, the wire is heated with the author's small galvano-caustic battery. For touching the root, he always employs a very fine galvano-cautery point, with the same battery. [This battery may be obtained in London of Messrs. Krohne and Sesemann. Its chief advantages were mentioned by the reporter in a note in the *Specialist* for October 1880.—*Rep.*]

9. *Michael on the Employment of Nitrite of Amyl in Diseases of the Ear.*—Dr. Michael of Hamburg (*Ann. des Mal. de l'Oreille, du Larynx, etc.*, March 1881) has tried inhalation of nitrite of amyl in twenty-seven cases of subjective tinnitus. In nineteen, there was a more or less marked improvement. In three cases, the noises disappeared entirely. The majority were cases of otitis media hypertrophica. Of three cases of affections of the labyrinth, two were relieved. From one to five drops of the nitrite were inhaled at each sitting, the inhalation being stopped as soon as the patient complained of vertigo. In all cases in which improvement resulted, the tinnitus became more marked during the inhalation. A second inhalation had usually a more lasting effect than the first, the benefit obtained from which was of very variable duration.

E. CRESSWELL BABER, M.B.

10. *Brown on Impacted Foreign Bodies in the External Auditory Meatus.*—Dr. Francis H. Brown (*American Jour. of Otology*, vol. iii, 1881, p. 29) says that, judging from the remarks of some authors, the meatus auditorius is looked upon as a *terra incognita*, much as the colon or the pleural cavity would be, and its investigation to be entered on as we should that of any of the inner organs of the body. Every practitioner should, on the contrary, recognise the fact that the entire passage of the outer ear is within his sight, and that the treatment of its diseases should be governed by the same rules which would dictate his care of any other portion of the body's surface. After speaking of the various instruments in common use for the removal of foreign bodies from the external auditory meatus, Dr. Brown says the point he wishes to make is, that tightly impacted bodies in the ear must be removed; that the practice of allowing them to rest, even in cases where no apparent and immediate irritation and inflammatory action are present, does not offer assurance that subsequent trouble will not arise; and, in fact, at some

time or other, with the accumulation of cerumen in the ear, with the access of cold, or by some other means, the meatus is very likely to take on inflammatory action, in which case the integrity of the middle ear may be jeopardised. If the body be firmly impacted in the ear from the first, its very presence and pressure induce œdema of the meatus; and the longer it remains, the more unsatisfactory will be the attempt to remove it. A sort of burr is often formed, both before and behind the body, caused by the œdema to which the stoppage of circulation gives rise, and this may obscure the body from view. As an example of what may be expected when such foreign bodies are allowed to remain, Mr. Hutchinson speaks of a child with a locust-bean in its ear, which could not be removed. The bean soon swelled, and filled the cavity. A week later the child was feverish, and had pains in the head; then paralysis of the portio dura came on. Dr. Brown considers the Tiemann bullet-forceps the best instrument for extracting, and he gives a note of a case in which an impacted kernel of corn was removed by this instrument, the patient being placed under ether.

11. *Schwartze on Injury of the Ear by a Knitting Needle.*—H. Schwartze records a case (*Archiv für Ohren.*, Band xvii) in which the accidental thrusting of a knitting needle into the ear of a child was followed by profuse discharge of cerebro-spinal fluid and severe symptoms of cerebral irritation from hyperæmia. He thinks it probable that the needle passed through the fenestra ovalis into the vestibule, and, owing to the free communication shown to exist by the injections of Schwalbe between the labyrinth and the arachnoid cavity, that the fluid discharged proceeded from the labyrinth. The hyperæmia of the brain may be attributed to the distention of the blood-vessels, to fill the space left by the outflow of cerebro-spinal fluid. Frederic S. Eve.

TOXICOLOGY AND MEDICAL CHEMISTRY.

RECENT PAPERS.

1. Rockey, A. E.—On Rossbach's Delicate Tests for Poisons. (*Therap. Gaz.*, March 1881.)

2. Reinl, C.—A Case of Atropia Poisoning. (*Prag. Med. Woch.*, 1880, No. 20.)

3. Ford.—On the Antagonism of Atropia to Morphia. (*St. Louis Med. Jour.*, June 1881.)

4. Lead-Poisoning from the Use of a Face-Powder. (*Physician and Surgeon*, April 1881.)

5. Hodgson, A. S.—Toxic Properties of Morphia. (*Philad. Med. and Surg. Rep.*, May 28.)

6. Macdonald.—Poisoning by Hydrochloric Acid: Recovery. (*Edin. Med. Jour.*, June 1881.)

7. Giscaro.—Sulphuretted Hydrogen in the Urine. (*Revue Med. de Toulouse.*)

8. Friedberg, H.—Acute Poisoning by Carbolic Acid. (Virchow's *Archiv*, Band lxxxiii.)

9. Ribbert.—On the Formation of Hyaline Tube Casts. (*Centralb. für die Med. Wissen.*, No. 17, 1881.)

10. Zander.—The Seeds of Xanthium Strumarium. (*Inaug. Diss.*, Dorpat, 1880.)

11. Jaksch. — Peptonuria in Acute Rheumatism. (*Wiener Med. Wochenschr.*, No. 7, 1881.)

1. *Rockey on Rossbach's Delicate Tests for Poisons.*—An abstract of Rossbach's paper will be found in the London Medical Record for April, p. 168. Dr. Rockey (*Therap. Gaz.*, March 1881) was delighted with the idea, and the prospect of being able to detect strychnia in a solution of one part in 15,000 induced him to try it at once. He was disappointed to find that the infusoria lived and thrived in a solution of more than ten times this strength. To produce the change in their characteristic movements, followed by swelling of the body and death, required solutions of the strength of one grain to the ounce, and then death took place but slowly. Carbolic acid produced more decided results, and the bichromate of potash test detected less strychnia. Observations with atropine, eserine, and curare were equally unsatisfactory. Dr. Rockey believes that in America the infusoria have considerably more stamina than they have on the other side of the water.

2. *Reinl on a Case of Poisoning by Atropia.*—The patient, a small, weak anæmic child, aged 6, took by mistake, between eight and nine in the morning, a teaspoonful of a solution of atropia, 0.05 to 10.0, or about 35 milligrammes (a little more than half a grain). His face soon became flushed, his gait staggering, and his voice hoarse. An hour later, antidotes were administered, including tannic acid, iodide of potassium, and injections of infusion of jaborandi. Soon the patient exhibited hallucinations, and became delirious. Seven and a half hours after the dose had been taken, Reinl (*Prag. Med. Wochenschr.*, No. 20, 1880) saw the child, who was restless and unconscious, and still delirious, the pulse being 140 and respirations 30. A hypodermic injection was given of 5 centigrammes of morphia (about three-fourths of a grain), and in ten minutes the pulse fell to 100 and the respirations to 20. The restless movements subsided, and in half an hour the patient slept, the pulse falling quickly to 96, and the respirations to 18. The following morning, after a good night's rest, the child was quite cheerful, though there remained twitchings of the muscles of the face and extremities, which continued three days. [This case affords no proof that morphia is an antidote to atropia. Children are curiously insusceptible to the action of belladonna. Holthouse has recorded the case of a boy, aged 3½ years, who recovered after taking half a grain of atropia; and there have been cases of recovery after taking 0.5, 0.6, 1.0, and 1.5 grains respectively. The injection of an infusion of jaborandi could hardly be expected to do any good. It is true that a hypodermic injection of a one-hundredth part of a grain of atropia will instantly check the perspiration and salivation of jaborandi, but the contrary is not the case. Atropia is a much more powerful alkaloid than pilocarpin; and in a case of poisoning by atropia recently recorded by Purjesz, of Buda-Pest, as much as 6½ grains of hydrochlorate of pilocarpin had to be administered hypodermically, before any antidotal properties were observed. It is interesting to note the fall in pulse and respiration after the injection of the morphia. It would appear that, although morphia is not an antidote to atropia, it will retard the restlessness and delirium caused by a poisonous dose of that alkaloid.—*Rep.*]

3. *Ford on the Antagonism of Atropia to Morphia.*—Dr. Ford (*St. Louis Med. Jour.*, June 1881) records a case of poisoning by morphia treated with atropia. The patient, a lady, had been for some time in the habit of taking morphia, in consequence, partly, of a late affliction, and partly, it was believed, from neurotic trouble arising from uterine disorder.

It was known that on a certain Sunday she took a grain of 'morphine'; on Monday, another grain; on Tuesday, in the morning, a smaller dose, probably half a grain; whilst, in the afternoon of that day, about six o'clock, she took two grains. At 9 P.M. she was seen by Dr. Ford, who found her with a slow pulse, cold extremities and clammy skin, the respirations being ten or twelve to the minute, with perhaps a deep breath or two every now and then. The pupils were not greatly contracted. She was perfectly insensible, and could not be aroused. Dr. Ford at once administered some strong coffee, and, after waiting from ten to fifteen minutes, gave her 'several considerable doses' of ammoniated tincture of valerian. Her symptoms, however, increased in severity, until at last she was unable to swallow. A hypodermic injection was then administered, of sixteen minims of a 1 in 120 solution of atropia. Dr. Ford considered that, as the patient had taken about sixteen times the ordinary dose of morphia, he could not be far wrong in giving her as an antidote about sixteen times the ordinary dose of atropia. At all events the treatment was successful, and in from ten minutes to a quarter of an hour the pulse rose to a hundred, and the respirations to twenty-four in a minute. In twenty minutes she became restless, and showed signs of returning sensibility. From this time her condition gradually improved, and she awoke at two o'clock. The next morning she was well, with the exception of some prostration and a feeling of numbness all over the body. [This is an instructive case, and the patient is to be congratulated on her recovery after taking so large a dose. The drug is spoken of as 'morphine', but it is not stated whether it was the acetate or hydrochlorate of morphia. It would be interesting to know how long the lady had been in the habit of taking morphia, and in what doses, so that we might get some idea of the degree of tolerance likely to have been established. It is curious that Dr. Ford should have allowed from ten to fifteen minutes to elapse after administering the coffee before taking other steps. He does not appear to have done much to rouse the patient. She might have been walked about and flapped with a wet towel, or had the battery applied to her legs. The cold douche, too, is not to be neglected in these cases, and there are many other measures which naturally suggest themselves. The dose of atropia given (one-eighth of a grain) is in accord with the most recent investigations; Bartholow recommending a twentieth of a grain for every grain of morphia taken. For a full discussion of the subject of the antagonism between opium and belladonna, see an article under the head of 'Recent Studies in Therapeutics', *Brit. Med. Jour.*, February 12, 1881.—*Rep.*]

WILLIAM MURRELL, M.D.

4. *Lead-Poisoning from the Use of a Face-Powder.*—The *Physician and Surgeon* for April 1881 contains a report of a case of chronic lead-poisoning, in which the patient was pale and weak, with her hands flexed at the wrists, a blue line on the gums, and unable to feed or dress herself. No cause could be discovered until it was found that for twelve years she had used a face powder called 'flake-white', an analysis of which proved it to be entirely composed of carbonate of lead. Being under Professor Palmer's care in hospital, she was put upon a treatment of iodide of potassium, sulphur baths, and electricity, and in three weeks she could dress and feed herself. After five weeks she was discharged. It could not be shown that any of the lead was eliminated by the kidneys, though the urine was examined for it.

5. *Hudson and others on the Toxic Properties of Morphia.*—Dr. A. S. Hudson, of Stockton, California, thinks that the dose of morphia required to produce a fatal result varies greatly with different individuals (*Philad. Med. and Surg. Reporter*, May 28, 1881). He mentions one case (the wife of Dr. Case, of California, who died of cancer of the breast), that never required more than one-sixteenth of a grain of morphia by the mouth, to relieve the severest pain, and its continued use did not require an increase in the dose. A larger dose produced unfavorable symptoms. On the other hand, he mentions recovery in one case from a dose of seventy-five grains, and in another from two drachms of the drug. In the first instance, belladonna was resorted to, but the latter recovered spontaneously. He does not believe that we have any means of knowing that belladonna, or any other drug, is antagonistic to the toxicological properties of morphia. In the same number of the *Reporter*, Dr. J. A. Kimmel, of Ohio, reports the case of a man who took fourteen grains and recovered, after several hours of vigorous treatment with atropia, electricity, etc.; while Dr. C. M. Nutt, of Indiana, reports a case of alarming narcosis from a hypodermic injection of one-third of a grain (*Louisville Med. News*, June 4, 1881). In the latter case, contraction of the pupils, gastric disturbance, and exhaustion, continued for four days after the dose was administered.

6. *MacDonald on Poisoning by Hydrochloric Acid: Recovery.*—Dr. MacDonald (*Edinburgh Med. Jour.*, June 1881, p. 1093) was called to see a man who had taken an ounce and a half of hydrochloric acid, presumably in one gulp, as there was no corrosion of the mucous membrane of the mouth or fauces. He had taken, by way of antidote, before the doctor's arrival, a teaspoonful and a half of bicarbonate of sodium, and a bottle of soda-water. Dr. MacDonald immediately gave him a cupful of solution of carbonate of sodium, which was rejected with some coffee-ground-like matter. The patient was then surrounded with hot-water bottles, and was directed to have milk alone as a nourishment. Subsequently the temperature rose to 102 deg.; pulse, 100 to 108. The epithelium of the tongue became leathery and ichthyosed in appearance; and this cleared off on the tenth day. There was complaint of pain opposite the cardiac and pyloric orifices of the stomach, and of general tenderness over the abdomen. Opium was given for sleeplessness, and turpentine stupes were placed over the whole abdomen. A little diarrhœa of irritation set in, the stools smelling of turpentine. The inflammatory danger over, convalescence was uninterrupted save by a little cough, which succumbed to an ordinary mixture. Dr. Mac Donald remarks, in reference to this case, on the evidence which it gives of the low corrosive power of hydrochloric acid; on the absence of mouth-signs to aid the diagnosis, which might happen in a case where no information could be had as to the poison taken; on the diarrhœa of irritation containing absorbed turpentine; and on the apparent general result to the patient of only some gastric catarrh, evidence of œsophageal stricture or gastric ulcer being in the meantime wanting.

7. *Giscaro and Cameron on Sulphuretted Hydrogen in the Urine.*—Dr. Giscaro reports in the *Revue Méd. de Toulouse* the case of a gentleman, aged 42, the subject of frequent attacks of dyspepsia, symptomatic, according to Dr. Giscaro, of a rheumatic

affection. The patient observed that his urine had constantly the odour of rotten eggs, prior to the advent of the gastric symptoms from which from time to time he suffered. A chemical examination of the urine at one of these periods showed that it contained sulphuretted hydrogen. Dr. Giscaro confesses his inability to explain this strange phenomenon. Dr. Cameron, of Dublin, unaware of Dr. Giscaro's communication, has published in the *Lancet* (Nov. 13, 1880, p. 766) a case of a similar kind which was under his observation. The patient was a gentleman of middle age, whose complaints were always of a somewhat indefinite character. His urine contained free sulphuretted hydrogen the moment it was passed. This continued for a period of somewhat over two years. So soon as the sulphuretted hydrogen disappeared, its place was taken by ammonia, which in its turn continued present in the urine for about two years also. Dr. Cameron likewise refers to the case of a young lady from whose skin sulphuretted hydrogen was exhaled. Her urine contained no sulphuretted hydrogen.

8. *Friedberg on a Case of Acute Poisoning by Carbolic Acid.*—Dr. Hermann Friedberg (Virchow's *Archiv*, Band lxxxiii, Heft 1) publishes a case in which 8½ grammes (128 grains) of carbolic acid mixed with glycerine (equal parts) caused the death of a vigorous young man aged twenty-three, in about twelve minutes after having been swallowed.

9. *Ribbert on the Formation of Hyaline Tube Casts.*—Dr. Hugo Ribbert (*Centralbl. für die Med. Wiss.*, No. 17, 1881) is of opinion that hyaline tube-casts are simply due to the coagulation of albumen in the tubules, effected by the acidity of the secretion of the renal epithelium. Egg-albumen, treated with dilute acetic acid and coagulated by heat, appears hyaline under the microscope. Having caused albuminuria in rabbits by temporarily clamping the renal arteries, he injected 20 to 30 grammes of a 2½ per cent. solution of acetic acid into the jugular veins, and shortly afterwards extirpated the kidneys and coagulated the albumen in them by plunging them into boiling water (Possier). In two cases, he succeeded in finding some of the Malpighian capsules filled with hyaline masses, which dissolved in water and became granular on the addition of alcohol. But in other experiments, having extirpated the kidneys from rabbits similarly made albuminuric, he found that if left in warm water at about 60 deg. C. (140 Fahr.), in half an hour he obtained no coagulation, or only the familiar granular one; but if he employed fresh urine instead of water, the albumen coagulated in hyaline masses, not soluble in water and not changed by alcohol or by boiling in water. A solution of uric acid and dilute phosphoric and hydrochloric acids produced the same result, also a simple solution of urea, while alkaline urine failed. Robert Saundby, M.D.

10. *Zander on the Seeds of Xanthium Strumarium.* In the year 1878 numerous deaths, especially among children, were said to have resulted, in a district in Russia, from the use of these seeds, and an oil expressed from them. The symptoms were those of belladonna-poisoning, with dilatation of the pupil. This writer (*Inaugural Dissertation*, Dorpat, 1880) found that seventy seeds produced no effect on himself, although he had heard that ten seeds would cause vomiting and dilatation of the pupil. Again, 340 seeds produced no effect on cats. An alkaloid derived from the seeds, injected subcutaneously into frogs, had no effect upon them. The observations, however, have little value, seeing that he employed seeds two years old, while the ten seeds spoken of above were fresh.

11. *Jaksch on Peptonuria in Acute Rheumatism.*—Dr. Jaksch has examined twelve cases of acute rheumatism as to this point, and he finds (*Prager Med. Woch.*, No. 7, 1881) that:—1. Peptonuria is almost invariably present in the course of the disease; 2. The pepton present is directly dependent on the subsidence of the local inflammatory symptoms. The methods used in testing for and separating albumen, previously to testing for pepton, were those of Hofmeister; and by using the same quantity of urine daily, a rough idea of the variation in quantity of the pepton was obtained.

James Anderson, M.D.

SYPHILOGRAPHY.

RECENT PAPERS.

1. Quinquaud and Ullmann.—A Clinical Study of Syphilis in Old People. (*Ann. de Derm. et de Syphil.*, 1881, No. 2, p. 247.)

2. Barthélemy.—Observations on Visceral, particularly Renal, Syphilis. (*Ibid.*, p. 272.)

3. Molènes. — On Non-infecting Chancres of the Cervix Uteri (diphtheroid variety). (*Ibid.*, p. 295.)

4. Le Pileur.—New Facts in Favour of Aspiration in the Treatment of Suppurating Buboes. (*Ibid.*, p. 308.)

5. Spillmann.—Stricture of the Vagina in a Patient with Tertiary Syphilis. (*Ibid.*, p. 324.)

6. Caspary.—On the Origin of Hereditary Syphilis. (*Viertel. für Derm. und Syphilis*, 1881, Heft 1, p. 35.)

7. Mracek. — On Syphilitic Initial Lesions of the Cervix Uteri. (*Ibid.*, p. 47.)

8. Schuster.—Remarks on the Curability of Syphilis. (*Ibid.*, p. 87.)

9. Krowczynski.—On Excision of the Initial Sclerosis. (*Ibid.*, p. 101.)

10. Paquet.—The Treatment of Gonorrhœa by Copaiba Resin. (*Gaz. Hebdom.*, 1881, No. 22.)

11. Rollet, Diday, Rodet, and others. — On the Treatment of Syphilis. Discussion before the Société Nationale de Médecine de Lyon. (*Lyon Méd.*, 1881, Nos. 15, 16, 17, 19, 20.)

12. Lermoyez and Hitier.—On the Use of Pyrogallic Acid in the Treatment of Soft Chancres. (*Bull. Gén. de Thérap.*, May 15, 1881.)

13. Bartholow.—A Case of Progressive Muscular Atrophy associated with Constitutional Syphilis. (*Louisville Med. News*, June 4, 1881.)

14. Duplay and Brun.—On a peculiar and hitherto imperfectly described Form of Gonorrhœal Arthritis. (*Arch. Gén. de Méd.*, 1881, p. 541.)

15, Rigal.—On a Severe Case of Vomiting caused by Syphilitic Disease of the Brain. (*Gaz. des Hôpitaux*, 1881, No. 70.)

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2. *Barthélemy on Visceral, especially Renal, Syphilis.*—M. Barthélemy reports (*Annales de Derm. et de Syph.*, 1881, No. 2, p. 272) five cases of renal disease in connection with syphilis. In the following instance, the patient improved under specific treatment. A woman, aged 33, who had been infected three years before, was admitted into the St. Louis Hospital, under the care of M. Fournier, in November 1879. Six months previously she had been under treatment for mucous patches, vertigo, and pain in the head. There was at that time no albumen in the urine, and after three months' treatment the woman went out cured. In October diarrhœa appeared; and at the beginning

of November, œdema of the lower limbs and genital organs was noticed. On readmission, the face also was puffy. There was intense dyspnœa, and *râles* were audible all over the chest, but there was no dulness, nor pain in the loins. The urine was copious, and contained a large quantity of albumen. The patient subsequently suffered from an iliac abscess, but she gradually recovered under antisyphilitic remedies, and on her discharge from hospital the urine became only slightly cloudy on the addition of nitric acid.

3. *Molènes on the Diphtheroid Variety of Non-infecting Chancre of the Cervix Uteri.*—This paper (*Ibid.*, p. 295) contains a long string of quotations from the writings of various authors respecting venereal lesions of the cervix, as well as a report of two cases of so-called diphtheroid chancre, which were under the care of M. Martineau in the Lourcine Hospital. Pauline M., admitted February 8, 1881, stated that sores of the genital organs had appeared ten days before. On examination, two ulcers, having all the characters of simple chancres, were found on the right labium, and a third in the left genito-crural fold. The nymphæ were œdematous. A little above the fourchette, were two ulcers similar to those on the labium. There were also some follicular sores about the meatus urinarius, and the glands in both groins were enlarged, those on the right side being inflamed. On the anterior lip of the cervix uteri was a projection formed by the confluence of seven or eight smaller projections, separated by furrows; the whole mass, which was of the size of a franc piece, having somewhat the appearance of the surface of the brain. The lesion was covered by a closely adherent diphtheritic membrane. M. Martineau diagnosed a simple chancre of the cervix. There were also on the anterior vaginal wall two small ulcers, with sharply cut edges. There were no signs of syphilis. On Feb. 13, the false membrane was removed from the cervical ulcer, and the pus from beneath it was inoculated on the patient's thigh. The inoculated spot was then covered with a watch-glass. A well-marked soft chancre was produced. On Feb. 28, the vaginal sores had disappeared without any local treatment; the cervical sore had diminished by one half, and was healing rapidly. The sores of the vulva had already healed under iodoform. In the second case the appearances were very similar to those just described. Auto-inoculation, however, was not practised in this instance. The patient was kept under observation for three months, without showing any sign of syphilis.

4. *Le Pileur on the Aspiration of Suppurating Buboes.*—In a paper published in the *Annales de Derm. et de Syph.*, 1880, p. 224; and 1881, p. 308, M. Le Pileur reports nineteen cases of bubo treated by aspiration. Seventeen of the buboes were in the groin; of these, twelve followed soft chancres, six being virulent and six simple abscesses. One was in a syphilitic subject, two were consecutive to scabies, and three were strumous buboes. The remaining two were submaxillary abscesses. In buboes caused by chancre, the author advises that the pus should be inoculated after aspiration, and, if it be found to be virulent, that a solution of nitrate of silver should be injected into the bubo; thus, according to the author, other openings may be prevented. Even if the opening ulcerate, the course is said to be much milder than after the use of the bistoury. M. Le Pileur thinks suppurating adenitis of every kind ought to be treated by aspiration when fluctuation is distinct. The scar is nearly invisible, or at least insignificant. The duration of the affection is shorter than under the ordinary mode of treatment. The nineteen cases gave an average duration of about twenty-four days after aspiration. For the mode of operating, the author refers the reader to his *Etude sur les Adénites Inguinales*, 1874; but, as far as can be gathered from the cases reported, the pus would seem to have been simply drawn off through a trocar, of which the point could be concealed, and a shred of lint placed in the opening and kept there for about twenty-four hours. Poultices were also applied.

7. *Mracek on Syphilitic Initial Lesions of the Cervix Uteri.*—Dr. Mracek of Vienna begins his long paper (*Viertelj. für Derm. und Syph.*, 1881, Heft 1, p. 47) with a list of authors who have written on the subject, and quotes Ricord, Sigmund, Fournier and others. The author then proceeds to consider the cases treated by him in Sigmund's clinic from Oct. 1877 to Dec. 1879. The total number of women was 659, of whom 437 were syphilitic. Of these 437, 40 were suffering from primary syphilis, 368 from secondary, and 29 from tertiary or gummy affections; 375 of these women (nearly 86 per cent.) had lesions of the vaginal portion of the uterus, which was the seat of primary syphilitic lesions in 21, and of secondary syphilitic lesions in 96. In 99, the uterine changes were due to pregnancy and the puerperal state; and, in 159, to non-syphilitic affections of other kinds. In the remaining 62 cases, the cervix was healthy. Thus, nearly 5 per cent. of the whole number of syphilitic women had primary lesions of the cervix. The author next reports 24 cases, which he considers to be examples of primary syphilitic disease of the cervix. These cases, of which 22 were in Sigmund's clinic, one under the care of Arlt, and one under the care of Späth, had all been under the author's own observation. Seven cases came under treatment before the appearance of general symptoms of syphilis; but, in all these, lesions of the external genitals were present as well as those of the cervix. In the remaining 17 cases, secondary symptoms had already appeared. The lesions observed on the cervix consisted of one or more ulcers with indurated base, and surrounded by a red areola. The cervix itself was also swollen in many instances, but there do not appear to have been any characteristic signs by which the syphilitic nature of the sores could have been established in the absence of other symptoms of the disease. The lesion was most frequently on the anterior lip (eight times); the whole circumference of the os was involved seven times; the posterior lip alone four times, and both lips separately, three times. In one case, the everted mucous membrane of the os and lower portion of the cervical canal was the seat of the lesion. As regards diagnosis, the author agrees with Sigmund that it depends on the exclusion of other causes and the presence of other signs of syphilis. In seven cases, there were also papules of the vaginal mucous membrane; in ten, of the vestibule and vaginal entry; and in eighteen, of the labia. Only twice was the cervix uteri alone affected. The lesions were readily amenable to treatment, consisting of irrigation of the vagina three or four times a day, and the application of tampons soaked in solution of iodine, iron, or iodoform, or of iodoform ointment. In some of the cases, where the whole cervix was much infiltrated, tincture of iodine was applied daily. General treatment by mercury or iodide of potassium, or both, was also carried out at the same time.

10. *Paquet on Copaiba Resin in Gonorrhœa.*—M. Paquet presented to the Société de Thérapeutique (*Gaz. Hebdom.*, No. 22, 1881) capsules made by himself, and containing only copaiba resin after separation of the volatile oil. This separation was suggested by the reserches of Gubler, who showed that the resinous portion of copaiba was eliminated by the kidney, while the essential oil was eliminated by the respiratory organs and by the skin, giving rise to a peculiar odour of the breath, and, not unfrequently, to the well-known form of rash. The capsules contained three parts of copaiba resin, and two parts of oil of sweet almonds, and had been prescribed by MM. Mauriac, Paul, and Gallard, who found them quite as effective as the balsam in its ordinary state, while the disagreeable consequences of the latter were escaped.

14. *Duplay and Brun on a Form of Gonorrhœal Arthritis.*—In the *Arch. Gén. de Méd.*, May 1881, p. 541, MM. Duplay and Brun discuss a form of gonorrhœal arthritis which, according to them, had not before been fully described. This variety of arthritis may come on suddenly, without any known immediate cause, or it may follow slight injury. Most frequently, however, it is preceded by malaise, slight fever, loss of appetite, etc. The first symptom is pain, which comes on with great acuteness. This pain begins, and is always worst, just at the spot where the articular surfaces of the bones touch each other, and is increased at night. Besides this spontaneous pain, acute suffering is caused by pressure about the joint. Swelling soon follows the pain, and it also first appears exactly at the line of junction of the bones which form the joint. There is little or no effusion into the synovial cavity, the swelling being chiefly due to infiltration of the periarticular tissues. The œdema extends above and below the affected joint, and sometimes there is an obscure kind of fluctuation, leading to a suspicion of abscess. Two cases are mentioned in which incisions were made under this belief. The swelling is not due to effusion into the sheaths of the tendons. In the treatment of this form of arthritis, the most important point is absolute rest of the joint by means of a plaster-of-Paris bandage. The pain then soon disappears, and, in favourable cases, the joint recovers almost entirely. If, however, the joint be not fixed until several days after the onset, more or less stiffness is likely to remain; and if the affection be neglected altogether, ankylosis will probably occur; indeed, this sometimes happens in spite of careful treatment. The wrist and the elbow appear to be the joints most frequently attacked, while the knee, which is, frequently the seat of the effusive form (hydrarthrosis) is comparatively seldom involved. However, any joint may suffer, and the authors have seen marked examples of this form of arthritis in the metacarpal, phalangeal, and sterno-clavicular articulations. But whatever joint is attacked, the symptoms are essentially those which have just been described. The paper concludes with notes of six cases (three of the patients being women), illustrating the various points already mentioned; the chief features of this form of joint-affection are the occurrence of pain and swelling, which always begin and remain most marked exactly at the interarticular line, the presence of crackling, and the liability to ankylosis if the joint be not fixed early.

15. *Rigal on the Administration of Chloroform in a Case of Vomiting caused by Syphilitic Disease of the Brain.*—A woman, aged 35, who had been under treatment for gummata, etc., came under the care of M. Rigal at the Hôpital Necker (*Gaz. des Hôpitaux*, 1881, No. 70), suffering from cephalalgia and vomiting, supposed to be caused by an intracranial syphilitic growth. The headache was quickly relieved by mercury and iodide of potassium, but the sickness was uncontrolled by any of the usual remedies, *e.g.*, ice, morphia, chloral, etc.; while a daily dose of two grammes (30 minims) of chloroform checked it at once. The drug was discontinued at the end of three or four days, but there was no return of the vomiting.

Arthur Cooper.

REVIEWS.

Rheumatism: Its Nature, its Pathology, and its Successful Treatment. By T. J. Maclagan, M.D. London: Pickering and Co. 1881.

Whatever may be thought of the arguments of this book taken as a whole, none will deny that in many ways it is possessed of conspicuous merit. Dr. Maclagan is already well known to the profession by a double-sidedness which always commands attention in whomsoever we find it; by an aspect which, while always inclined to the theoretical side of medicine, and therefore to an *à priori*, perhaps even to an imaginative, line of argument, yet does not lose touch of the ever lively sense of the aim of all theories to descend to the level of practice. In the book before us, Dr. Maclagan, already long an advocate for a particular form of treatment for rheumatism, puts the questions concerned into definite shape. But although the author carries his readers pleasantly along with him by the perspicuity of his style, he leaves behind him a feeling that all cannot be quite such straight sailing as he would have it to be; his advocacy is the case of a pleader, not the statement of a judge.

As a statement of the case of the treatment of rheumatism by salicin it is ingenious, intelligible, well sustained, and in every way excellent. The subject is well and ably thought out in a particular line; theory and practice are consistently squared; round pegs seem everywhere to fit into just the round holes made for them, so that the reader can hardly resist coinciding in the author's conclusion that salicin, given in thirty to forty grain doses every hour till an ounce is taken, and then in somewhat less frequent doses till a second ounce has disappeared (the price of the drug being apparently something under twelve shillings an ounce), is as much a specific for acute rheumatism as quinine is for ague. The author's plan is shortly as follows. There are first of all a few skirmishing chapters upon the symptoms of rheumatism—acute, subacute, and chronic; the differential diagnosis; and the duration of rheumatic fever; its seat and special characteristics. In this way we gain the position that rheumatism is an inflammation of specific nature, the result of a special blood-poison. The nature of this poison is next considered. After a lengthened discussion, the lactic acid theory is dismissed as untenable. Lactic acid is not, indeed, considered to be without any action; or as having no share in the production of the phenomena of a rheumatic attack; it may probably stimulate the skin to the excessive action which is common, and may aggravate the joint-pains; but such

actions do not show that lactic acid is the rheumatic poison. For a miasmatic theory of rheumatism, it is first argued that the rheumatic poison enters the body from without; next, that such a poison must be either a contagion or a miasm. Since it cannot be the former, for reasons given, it must be the latter; and this view is corroborated by the fact that the attributes of the rheumatic are the same as those of the miasmatic fever. These are the aptitude for occurrence in low-lying and damp localities in certain seasons of the year; the pecular liability of some people, the want of definite duration of symptoms, and the incommunicability of the disease. A still further likeness may be traced in the symptoms. Irregularity of type; change of constitution—by which the subject is rendered more susceptible after one attack; and the power of arrest which resides in particular drugs in the cinchona compounds for ague and the salicylic compounds for rheumatism, make it evident to the author that the rheumatic and malarial poisons are closely allied. The nature of malaria is next discussed, and the view is maintained that it consists of minute organisms. In considering the mode of action of malaria, contagia and malaria, or continued and intermittent fevers, are contrasted; and a taking analogy is suggested between the two groups, by separating each into two varieties, the eruptive and the non-eruptive. But, in so doing, some violence is done to ordinary classifications; and, in writing, we find ourselves in a difficulty before we are aware of it. We have spoken above of continued fevers; the author talks of 'contagia' only, and the group of contagia includes relapsing into the continued fevers, and thus are obtained the eruptive and non-eruptive forms, relapsing fever being the non-eruptive, and scarlatina, typhus, etc., the eruptive. For miasmatic fever, rheumatism, with its joint-disease, is the representative of the eruptive; and intermittent and remittent fevers are non-eruptive. Various points of difference mark the contagia from the miasmata; both, being dependent upon minute organisms, are dependent also upon the environment of these bodies, that is, upon something which they find in their nidus, and which is necessary for their reproduction.

This second factor, as the author calls it, determines the nature of the attack. If it be plentiful, the contagion gets into good quarters, and the attack is prolonged and severe; if small, the field is a small one, and the resulting attack is short and mild. 'The course of the continued fevers is continuous and regular, because the quantity of the second factor in the nidus does not fluctuate, and because, therefore, the contagion goes on, being consumed steadily until the nidus is exhausted. If the contagion were an organism which naturally went through a series of changes which involved alternate periods of activity and repose, and if the phenomena of the febrile state were the result of such changes as occurred only during the period of activity, the propagation of such an organism in the system would give rise to a malady characterised by alternations of pyrexia and apyrexia. The distinction between the malarial and continued fevers in conferring immunity from a second attack, is explained by the hypothesis that the second factor is thoroughly exhausted in the one case and not in the other, germs being left, which can be readily reproduced, in the latter. Reasons are given for thinking that the second factor exists in some cases in the blood, and is then readily reproduced; in other cases in the solid viscera, and is then easily exhausted. The continued fevers are of the latter class. In rheumatic fever, however, where it is supposed to reside in the fibrous structures of the joint, which would be somewhat equivalent to the solid viscera, we are told—somewhat contradictorily—we think, that the same natural tendency which originally led to the existence of the second factor in these tissues, leads also to its reproduction after it has been exhausted. We are not able to follow the author through the rest of his argument, which is elaborate and interesting. There are many places to which we could point in which it is somewhat strained, but nowhere are the views advocated without a plausibility which gives zest to the reading. We may take exception, however, to a statement on page 146, with reference to mitral contraction, which is not supported by any evidence that is worth attention. In speaking of endocarditis, the author appears to us to mean to imply that mitral contraction is occasionally an immediate result of an attack of acute rheumatism; and he states that inflammation both of the fibrous ring (the change he has previously described as producing the contraction) and of the valves indicates a more decided action of the rheumatic poison on the endocardium and a more severe attack of endocarditis, than inflammation of only one of them. That a presystolic bruit may be developed occasionally in the course of an attack of acute rheumatism, we are by no means indisposed to allow; but it is never a typical one, and indeed always possesses so little of any characteristic feature, that but few will admit its existence at all under such circumstances. But if it do exist, it cannot be held to indicate contraction of the orifice from thickening of the fibrous ring, but probably excessive vegetation upon the surface of the endocardium. Nor are we by any means sure of the truth of such a dictum as this, 'endocarditis rarely affects the right side of the heart'. It would be more correct to say that it often affects it, but that it seldom leads to the after-consequences which are found on the left side, of thickening and ulceration. And this is no unimportant point. The author sees in the rheumatic poison one which has a special predilection for particular parts; the fibrous textures enjoying the highest degree of functional activity, and being most subject to strain. But is this so? Is it not rather with rheumatism, as with syphilis, that it damages certain parts of the body alike, but, after it has worked this damage, the after-results of thickening, and so on, are dependent upon chronic processes of inflammation kept up by the strain to which some parts are constantly liable? In this light, both the left and the right side of the heart would be nearly equally liable to rheumatic endocarditis; and that some right-side inflammation is much more common than is usually asserted, may be readily proved by anyone with the requisite opportunities for dead-house investigation; but the right side, having less work to do, is enabled to repair the hurt, while the disease on the left side becomes chronic. This is not the whole of the question. There are, probably, chronic processes engendered which are at no time acute; but these also, we would hold, are more dependent upon the work done by the diseased part than upon the special localisation of the poison, which is probably all pervading.

The least satisfactory part of the book, as was to be expected, is that which devotes itself to treatment. Many will surely smile at the curt summary of the various treatments which have at one time or another been received with favour, and at their dismissal, one after another, somewhat in such terms as —'the results of this treatment seem to have been as

good as those of any other'. Upon salicin alone does the author grow eloquent, and here we have a remedy which for rheumatism acts the part of quinine for ague. Perhaps it was hardly to be expected, but it could be wished that the failures of the salicylates had been more thoroughly weighed. No one doubts now that salicin and the salicylates have a powerful influence in mitigating the symptoms of acute rheumatism. What we want is carefully weighed evidence, how far it does act as a specific or how far only by controlling certain symptoms. To this end, a book upon the failures of the salicylates and a rigorous examination of a number of such cases, carefully observed, of which many are now ready for analysis, would supply evidence which would far surpass in strength even the most brilliant pleading, and would settle the question which Dr. Maclagan, with all his ability, has not even yet closed.

James F. Goodhart, M.D.

Medical Diagnosis, with Special Reference to Practical Medicine. By J. Da Costa, M.D. Fifth edition, pp. 924. Philadelphia: Lippincott and Co. 1881.

Among the many guides to clinical medicine of both home and foreign production, there is not one that excels, even if it equals, the one before us. The recent manual by Dr. Finlayson suggests itself, and will bear most favourable comparison. The value of such works as these is variously estimated by different workers, but there can be no doubt that to clinical teachers a guide for their students is almost a necessity, to give some coherence to the scattered facts and observations that bedside teaching furnishes, in contrast to the regularly arranged descriptions of systematic lectures. The danger in all such aids is, that they may permanently impress on the student's mind what may be called a tabular aspect of disease, and an expectation on his part that the cases he will meet with will conform to a neatly arranged scheme and table, that has been a most serviceable guide in giving him his first ideas, and served as a preliminary chart, by which to steer in his first entrance on the vast subject of practical medicine. It may safely be left to a judicious teacher to determine when to discard the help of tables and dogmatic generalisations, and erect upon the groundwork that they have provided a more comprehensive view of disease, with the special features that every case separately offers; to commence with which, almost invariably results in the bewilderment of the learner. As a guide of this character, Dr. Da Costa's book deservedly holds a place in the highest rank. It is brought up to to-day, or as nearly so as any work can be that tries to keep pace with a progressive science (in passing, it may be mentioned that the spectroscope as an instrument of observation is not referred to). The various methods of examination, physical, chemical, etc., the explanation of the observed signs and symptoms, their clinical significance, and, finally, the reasoning that leads to a diagnosis, are excellently and clearly set out in reference to all the organs of the body; and the tables, when introduced, are well selected, and better expressed than is often the case. The introduction is admirable, but would gain in value if some suggestions were made as to how to question patients, an art of the greatest difficulty to the student, and often very imperfectly acquired.

W. H. Allchin, M.B.

The Student's Guide to Medical Case-Taking. By Francis Warner, M.D.Lond., M.R.C.P. London: J. and A. Churchill. 1881.

This work is based on experience gained as Medical Registrar to the London Hospital. It is intended to be a guide to the student at the bedside, directing him as to the best way to observe the symptoms and to arrange his notes. An outline of 'Instructions for Case-Taking', with additional instructions for children's cases, occupies the first few pages. In the body of the work, the diseases affecting the system generally, and then those peculiar to each organ or system of organs, are systematically passed in review. On the left-hand page the symptoms to be especially observed in any given case, together with some hints as to the most probable causation, are arranged under the usual headings; on the right-hand page the bearing of the facts noted is, wherever necessary, more fully explained. Diseases of the nervous system are, as a rule, fully dealt with, but the subject of hemiplegia might have been elaborated with advantage, and some assistance given to the student to enable him to localise approximately the site of the lesion. No fault can be found with the necessarily dogmatic tone in which the work is written. We have tested the manual in various subjects, and have found its statements to be generally accurate, clear, and well up to modern views on pathology. The student who observes disease with its aid at the bed-side, will have little or nothing to unlearn, though it is, of course, intended that he should also study some systematic treatise on medicine. The practical value of the volume would be increased by a more copious index; and a short account of the surface markings and normal position and relation of organs would be a desriable addition in a future edition, which, there can be little doubt, will soon be called for.

Dawson Williams.

Des Dyspepsies Gastro-Intestinales. Par le Professeur Germain Sée. Paris: Adrien Delahaye et Émile Lecossnier. 1881.

Any work emanating from the pen of M. Germain Sée needs nothing to recommend it to the attentive consideration of the medical profession, and the volume now before us is all that was to be expected from one so distinguished. It aims at considering the various forms of gastro-intestinal dyspepsia from the side of clinical physiology. A Physiological Clinique it is called, and such a title well explains its purpose and its scope. It is a thoughtful and studied production upon a difficult subject, and it is an elaborate attempt to give a complete natural history of the varied forms of dyspepsia. There are chapters on the chemical physiology of dyspepsia; upon the nature and cause of the varied symptoms of the different forms; upon the particular forms of dyspepsia; constitutional, such as gouty, anæmic, diabetic, alcoholic, nicotic, tuberculous, nervous, etc.; local, such as gastric, pancreatic, biliary, intestinal, and so on. Then follows a chapter on diagnosis, the comprehensiveness of which will be acknowledged when we say that the subject is treated under differential diagnosis; chemical diagnosis, by which is understood a recognition of the different chemical processes which have brought about the alterations; etiological diagnosis, or the diagnosis of dyspepsia according to their origin, and diagnosis of the locality of the disease. Pseudo-dyspepsias are treated in a chapter under several types. These are simple atony

of the intestines, mechanical atony, atony with the formation of coagulated mucus, atony from faulty bile, and spasmodic atony. The last section is on treatment, the subject being considered, not in relation to particular diseases, but in relation to the action of particular drugs or modes of procedure. It is considered, and perhaps rightly, that, when the fault has received consideration, and the mode of action of certain drugs, diet, etc., has been considered, there will be no difficulty in applying a proper remedy to any particular form of dyspepsia. It appears that throughout the whole volume a high standard of rational diagnosis and therapeutics has been steadily kept in view, which ought to be thoroughly appreciated ; and the more so, because one cannot but feel that any such aim tends, no doubt, to destroy the popularity of a book. Many will certainly take up this volume, and lay it down again, with the idea that it gives them no 'tips'. Nor does it. If we have read its aim rightly, it goes to the root of the questions involved, and endeavours, as far as is possible, to give us a more complete knowledge. It will have none of the deceptive gloss of empiricism. In this M. Germain Sée deserves the thanks of science. At the same time, we feel compelled to add that we think that he has made his work needlessly indigestible by the style he has thought fit to adopt, and which must appear to many to be one of wearisome subdivision. What with chapters, articles, paragraphs, etc., one finds it both difficult to preserve the thread of the investigations, so as to get at the sum of the results, and more difficult still to find any information that may be wanted in a casual way. This blemish is, however, somewhat atoned for by a good index; and this we can safely say, that no one who will take the pains to master the contents of the book can fail to have a more comprehensive view of the matters of which it treats.

JAMES F. GOODHART, M.D.

Suggestions as to Lines for Future Research. By A. H. SMEE. London: G. Bell and Sons. 1881.

MANY of these suggestions are valuable, and all the subjects dwelt upon are interesting and important. The following appear open to criticism. The author suggests the employment of peroxide of hydrogen *vice* carbolic acid, as a dressing for fœtid wounds. There can be no question that this agent would act in such cases as an effectual deodoriser; and, as Mr. Smee points out, it has no injurious action upon the organism. But, unlike carbolic acid, its great instability would render it impossible to dress a wound with peroxide of hydrogen and leave it for many hours, in the hope that it would remain free from septic changes. We have yet to discover an agent as perfect antiseptically as carbolic acid, and at the same time completely innocuous in every case to the human organism.

On page 20, the author argues from the destruction of so 'comparatively highly organised a structure' as a parasitic worm by the agency of peroxide of hydrogen, that this agent may prove useful in destroying lower forms of vegetable and animal life. It might be worth while to make such experiments ; but unfortunately the vitality of these 'lower forms' is so extraordinary, that the destruction by this agent of organisms more highly developed will afford little encouragement *per se* to the investigator.

On page 29, in attempting to throw doubt upon the diffusion of typhoid fever by sewer-gas, it is stated that no 'epidemic' of typhoid fever had existed in a town of 4,000 inhabitants during ten years, throughout the whole of which time a pipe communicating with the ventilating shaft of the main sewer, and untrapped, had served as overflow-pipe to a large tank used for the water-supply of the village. The evidence, however, against the aërial conduction of typhoid is not complete, until Mr. Smee can also inform us whether any so-called sporadic cases of typhoid had occurred in the town in question during or shortly previous to the period of ten years aforesaid. Till he can do so, it can hardly be said to be 'incredible' that the sewer was, during that period, 'free from the infective matter of typhoid'.

Mr. Smee's suggestions, *in re* 'vaccination', are of great interest ; and the geographically arranged statistics with which the paper concludes are evidently the result of considerable patient investigation, and may be of service to medical practitioners in choosing or avoiding various 'health-resorts' for their patients, etc.

G. STILLINGFLEET JOHNSON.

Diseases of Women, including their Pathology, Causation, Symptoms, Diagnosis, and Treatment. By ARTHUR W. EDIS, M.D., F.R.C.P. With illustrations. London: Smith, Elder, and Co. 1881.

IT is some time since so succinct and withal complete an account of the diseases of women has appeared as Dr. Edis' manual. It will form a trustworthy and intelligible guide to practitioners as well as students. Its order and clearness are remarkable. For instance, where the author wishes to emphasise the differences in the signs and symptoms of ovarian tumour and ascites, he has tabulated them *vis à vis*, so that the differential points stand out prominently, and are easily seen. The chapters on dysmenorrhœa and amenorrhœa, two symptoms which every practitioner has to treat, are exhaustive and detailed, both as to the causation and treatment.

Dr. Edis has omitted nothing old, and added much that is recent in gynæcological knowledge. The modern operation of Emmet is set forth in full, as are the latest operative procedures in lacerated perinæum. A chapter has been added on diseases of the bladder, and in it the author has not thought it unnecessary to give a careful description of the mode of introducing the female catheter. The book contains 528 pages, with 148 illustrations, nearly all of which have been well chosen and executed. The book will be welcome as well on account of its intrinsic merits, as because it will fill a place in gynæcological literature which was empty.

FANCOURT BARNES, M.D.

NEW INVENTIONS.

NEW STEAM SPRAY APPARATUS.

Messrs. James Allen and Sons, 21 to 23, Marylebone Lane, Oxford Street, London, who are now well known in the medical profession as the inventors and manufacturers of extremely convenient apparatus for the sick room, such as the portable Turkish hot-air and vapour bath, bronchitis kettles, ventilating croup kettle, and various convenient invalid food warmers, have sent us a new model of a steam spray apparatus, which is likely to be at least as popular as their well-known hospital spray producer. It has been made to meet the wants of many who require a small spray to use in place of

the larger apparatus. Its merits are its durability and portability, its independent boiler, and the variety of uses to which it can be applied. It not only serves as a small steam spray, but it may also be used as a small hand spray, for dressing or for steam douches to the throat and pharynx with the funnel piece. It has metal jets instead of glass, which break quickly, and it is provided with safety valves which ensure absence of risk in using it. It is handy, portable, likely to wear well, and cheap.

MISCELLANY.

We call the attention of our readers to the forthcoming second edition of Dr. Neale's *Medical Digest*, the first edition of which formed the seventy-fifth volume of the New Sydenham Society's publications, in 1876. The new edition will include more than 20,000 additional references; the *British Medical Journal*, London Medical Record, and *Practitioner*, having been added to the list of journals to which reference is made. No more useful book of reference has ever been produced, and we heartily commend it to our readers' notice. A digest of reference so compendious, extensive, and well selected, is invaluable.

Quassia Wood.—A decoction of this wood is recommended as a preservative against the bites of mosquitoes, flies, etc., and as a valuable agent for protecting choice fruit-trees, etc., from insects.

Superstition in the New World. — A well-dressed and apparently intelligent woman appeared, says the *Medical Record*, at the dog-pound in New York the other day, and asked for the fore-quarter of a dog that had been drowned. She said that her sister had consumption, and that some one had told her that the fore-quarter of a drowned dog made into a stew would cure the disease. She got the meat, and went away contented.

Skull-Measurements. — Professor Flower has published some further results of his researches with reference to the human skull. He states that the largest normal skull he has ever measured was as much as 2,075 cubic centimètres; the smallest, 960 cubic centimètres, this belonging to one of those peculiar people in the centre of Ceylon who are now nearly extinct. The largest average capacity of any human head he has measured is that of a race of long flat-headed people on the West Coast of Africa. The Laplanders and Esquimaux, though a very small people, have very large skulls, the latter giving an average measurement of 1,546; the English skull of the lower grades shows 1,542; the Japanese, 1,486; Chinese, 1,424; modern Italian, 1,475; ancient Egyptian, 1,464; Hindoos, 1,306.

Statistical researches as to the colour of the hair and eyes of children have been made in all the cantons of Switzerland, with the exception of Berne, Geneva, and Tessino. The investigation as to the first of these cantons is now terminated, and the results of the examination of 94,221 children are published by Professor Studer in the *Proceedings* of the Berne Society of Natural History (No. 989), and are accompanied by four coloured maps, which show graphically the results. It is seen from these researches that in the canton of Berne the dark type prevails over the fair, but that the pure types are not so numerous, especially in the central parts, as the mixed ones. The pure fair type, which makes 9 to 11 per cent. in the north-eastern parts of the canton, increases to the south (11 to 14 per cent. in the middle parts, and 15 to 20 per cent. in the Alps), and reaches its highest percentage in the secluded valley of the Saanen (28 per cent.) The dark type is most numerous in two regions—that of the western lakes and Old Rhætia (21 to 29 per cent.), whilst in the middle parts it reaches only 21 to 25 per cent., and only 16 to 20 per cent. in some secluded valleys. After having shown the distribution of mixed types, Professor Studer considers these data in connection with history, and comes to several interesting conclusions.

Surgery among the Mound-Builders.—Dr. Bradford (*Boston Med. and Surg. Jour.*, May 12, 1881), recently exhibited at the Boston Society for Medical Observation, some morbid specimens picked from over a thousand skeletons of the mound builders. They were, first, a femur with a perforation partially filled up and surrounded by evidences of suppurative osteitis, which may have resulted from external violence; second, two tibiæ. One was normal, while the other gave evidence of caries of the ankle. An exostosis showed an attempt at repair. The individual who had the latter bone must have been long sick, and gone about with some artificial support. Another specimen showed caries of the spine. The whole dorsal region was involved, and cure by ankylosis had taken place. The rest of the skeleton showed the person to have been a young female. Years must have elapsed before a cure was effected, during which time she must have required careful nursing. Fourth, two fractured femora had united in such good position that they must have been treated with considerable surgical skill. There was no bowing outward or forward, and but little rotation. The position could not have been maintained till the cure was attained without some pretty efficient means of maintaining the axis of the limb. The results would be considered good in these days in cases where extension could not be employed. From these circumstances, it is very probable that the mound-builders were as much superior in surgical skill to the modern Indians as they were in civilisation and knowledge of the arts.

German Sanitary Exhibition.—An exhibition of sanitary appliances, including means for the preservation of life, will be held in Berlin, from June 1st to September 30th, 1882. At the invitation of the Society for Technical Hygiene, a central committee of about 160 members, resident in various parts of Germany, has been formed; and local committees have also been established for the purpose of promoting the object in view. The lists of the local committees include the names of Dr. von Horn and Hildebrandt, and Professor Schönborn, of Königsberg; Drs. Erhardt, von Gietl, Pettenkofer, and Voit, of Munich; Dr. von Bardeleben, of Coblenz; Dr. Becker, of Cologne; Dr. Graf, of Elberfeld; Professors Finkelnberg and Rühle, of Bonn; besides numerous medical practitioners, municipal officers, and other persons. The exhibition will include objects, machines, and apparatus intended to promote public and private health, to rescue life, and to protect against accidents, as well as to provide succour to the injured in war and in peace, along with literature of the subject, including drawings, models, and descriptions. All persons able to contribute articles to the exhibition are invited to do so; and applications will be received up to November 15th. The local committee for the Rhenish province and Westphalia, which sits at Cologne, has appointed commissioners for each group of articles, with instructions to search out whatever is new and valuable in the two provinces, and to take measures, by correspondence and negotiation, for ensuring its being shewn in the exhibition. The 'Concordia' Society for promoting the welfare of the labouring classes, at its general meeting in Frankfort, determined to shew its practical interest in the exhibition by the institution of prizes. It offers a prize of 1000 marks (£50) for a popular essay, to occupy about four sheets of printed matter, on the most rational method of feeding the poorer classes, especially mechanics; also one for a guide to the building of houses for the families of labourers. Persons desiring further information respecting the prizes are referred to the General Secretary of the Concordia Society, at Mentz. A periodical devoted to the interests of the exhibition has been established in Berlin under the name of *Correspondenzblatt der Allgemeinen Deutsches Ausstellung auf dem Gebiete der Hygiene und der Rettungswesens*, and will continue to appear until the close of the exhibition.

The London
Medical Record.

PATENKO ON CORPORA FIBROSA OF THE OVARY.

ALL who have enjoyed many opportunities of examining ovaries must be familiar with certain tough white bodies, that offer considerable resistance to the knife. Their cut surfaces appear convex, and at a glance they may be seen to differ greatly from true corpora lutea in a state of atrophy. Until quite recently, they have not been the subject of so much attention as they deserve, yet, like every other abnormality to be found in the ovary, the recognition of their true nature is a matter of supreme importance in any endeavour to discover the earliest origin either of cystic or of solid ovarian tumours. Before the follicular, stromal, or vascular origin of cysts of the ovary can be settled, it is necessary to gain a very precise knowledge of the nature and changes of Graafian follicles, of the true histological elements of the stroma, and of the normal calibre of the vessels of the interior of the ovary and the thickness of their walls.

A very large proportion of the innumerable follicles existing in a child's ovaries from uterine life are destined never to mature, but undergo certain definite atrophic changes through childhood, and until senile atrophy occurs. Beigel* logically terms the degenerate undeveloped follicle a false corpus luteum, giving the name 'true' to the corpora lutea of menstruation, as well as to those formed in association with pregnancy. As adult age advances after puberty, large areas of degenerate tissue around these true and false corpora lutea are formed, and the vessels in this tissue have even thicker coats than elsewhere in the ovary. It is among these normal atrophic changes that the origin of cystic disease must be sought for. A very slight morbid influence may seriously affect the retrograde metamorphosis of the follicles, or may set up changes around the vessels.

The corpora fibrosa represent one kind of morbid change during involution of follicles. Dr. Patenko of St. Petersburg has recently devoted much attention to these bodies.† In ovaries containing corpora fibrosa, he first describes their formation from those follicles that have never grown beyond what is termed the primordial stage. The cells of the membrana propria undergo a granular degeneration, their nuclei disappearing. As the process continues, the membrana granulosa and the vesicula germinativa are converted into a granular mass, and the walls of the follicle fall in, its cavity elongating. At length, the cells of the membrana granulosa become changed into a characteristic, homogeneous, hyaline material. In riper follicles that degenerate without ever becoming mature, morbid changes in the direction of corpora fibrosa proceed in a different manner. Patenko and Slavjansky‡ insist on a careful recognition of the three layers which, they believe, constitute the wall of any follicle, whether in this stage or actually ripe for menstruation. They describe three coats: the outer is inseparable from the surrounding stroma, but richer in cells, and containing finer connective-tissue fibres. The second or inner coat is lymphatic tissue, pure and simple, containing numerous lymphatic vessels as well as reticular tissue and leucocytes. The third coat is termed membrana propria. In order to explain precisely what the two observers above quoted signify by this coat, we must remark that they term it a single epithelioid layer investing the cavity of the follicle so as to separate the epithelium of the cavity from the inner (or lymphatic) coat. Their 'endothelium' and epithelium together signify what is generally termed the membrana granulosa. Patenko adds that such 'endothelium', 'according to Debove's researches, always lies between epithelium and cellular tissue'.

To form a corpus fibrosum, this membrana propria falls in as a zig-zag band, soon assuming the characteristic hyaline appearance, and the stroma pushes into its deep folds. At length it becomes a mass of homogeneous shiny tissue, the hyaline changes involving all the remainder of the old follicle. The zig-zag border remains very distinct. Had the follicle undergone normal atrophy, its site would at last have been marked by a coarsely granular, hazy, and imperfectly circumscribed mass. Both these bodies, the abnormal and the normal remains of half-developed follicles, are often seen together. In ovaries where many primordial and half-developed follicles have undergone these changes, the stroma on section appears to be dotted over with a great number of little oval, semitransparent bodies, convex on section, but not very tough.

Lastly, a ripe follicle may become a corpus fibrosum. Not only do active changes go on in the membrana propria and in the lymphatic or inner coat, but the outer coat also shows hyaline degeneration from the first. The surrounding stroma, irritated by the changes in the follicle, becomes infiltrated with cells. This involves the formation of far more sclerosed tissue than in cases where the membrana propria alone is involved: hence the most solid, tough, and characteristic form of corpus fibrosum is the result. It must here be explained that it is the above-described hyaline tissue that Patenko considers as evidence of sclerosis. If the ovum have not escaped, active 'sclerosis' (employing the term henceforth as understood by the author) taking place in the walls of the follicle, the stroma can only force its way through these toughened walls to a very limited extent. Hence, in such a case, the corpus fibrosum is small, and almost entirely composed of the collapsed walls, represented by a hyaline zig-zag band enclosing a very narrow space filled with a few fibres. When, however, the follicle has discharged its ovum, and, instead of becoming a corpus luteum, undergoes sclerosis, or hyaline changes, in its walls, its cavity is invaded by a considerable amount of ovarian stroma, which undergoes partial atrophy. The corpus fibrosum thus produced is a structureless, semi-opaque, dull, fusiform body, the zig-zag altered walls having become blended with the atrophied and sclerosed stroma within them. Lastly, corpora fibrosa may form out of a follicle into which hæmorrhage has occurred. The zig-zag hyaline walls are then found to surround a cheesy mass, which is degenerate serum mixed with red corpuscles, the white having been absorbed. Blood in small ovarian cysts often assumes this appearance, especially in the case of those masses of greatly dilated Graafian follicles,

* Zur Naturgeschichte des Corpus Luteum. (*Archiv für Gynäk.*, vol. xiii, 1878.

† Ueber die Entwickelung der Corpora Fibrosa in Ovarien. (Virchow's *Archiv*, vol. lxxxiv, 1881.)

‡ Zur Normalen und Pathologischen Histologie des Graaf'schen Bläschens des Menschen. (Virchow's *Archiv*, vol. li, 1870.)

termed, by some authors, 'oligocystic' tumours. Such cheesy masses may be seen in the cut sections of a pair of ovaries with papillary growths from their surfaces, now in the museum of the College of Surgeons of England (No. 2621 c, Pathological Series), and removed by Mr. Durham from a young subject.

All these corpora fibrosa are devoid of vessels, and thus differ from the very vascular large fibromata of the ovary. The vessels around them, however, often undergo 'sclerosis' or hyaline change, beginning in the intima, which becomes a shiny, semi-transparent ring. A granular degeneration of the media takes place, involving the adventitia, which next becomes hyaline, and this last change extends inwards to the media, so that for a time two rings are seen, the altered intima and adventitia. All corpora fibrosa, with their surrounding vessels, contract, instead of growing; hence, even at first, the sum of the largest possible number of corpora fibrosa that could form in one ovary, will not make a perceptible enlargement of that organ, and can never become a fibroma.

So thinks Patenko, and with good reason. Yet may not some forms of these corpora fibrosa, and their surrounding vessels, become the starting point of multilocular cysts? In many ovaries, fellows to enormous cystic tumours, we have found slight enlargement, with conversion of nearly every follicle into bodies which appear to be corpora fibrosa undergoing a secondary change, and becoming cystic by breaking down of the hyaline tissue and invasion of the adjacent stroma. Noeggerath believes that cystic cavities result from changes in ovarian vessels, changes very similar to those above described. We cannot help thinking that he has assigned too many morbid appearances in the ovaries to vascular changes; although, on the other hand, it seems to us equally probable that Patenko has been somewhat over-eager to make out that the very same appearances are in all cases alterations of follicles. A careful study of the monograph under consideration, and a close comparison of its descriptive part with Dr. Noeggerath's paper,* will demonstrate such sources of fallacy. In no case is it very easy to distinguish the cut section of a large vessel that has undergone hyaline changes, from a section of a follicle much altered by the same morbid process. It is much to be wished that the precise meaning of the 'sclerosis', or 'hyaline change', were made more clear; for thereon much depends with regard to ovarian pathology. ALBAN DORAN.

SIMON ON SEA-BATHING.

M. JULES SIMON, in the course of a lecture delivered recently (*Le Progrès Médical*, 1881, No. 36) at the Hôpitaux des Enfants-Malades, made the following practical remarks.

Cold Sea-Baths.—You are all aware of the benefit many children derive from sea-bathing, but you have, perhaps, omitted to consider the numerous contra-indications to its use. My experience of twenty years in private practice, and at this hospital from which the chidren are sent to the sea at Berck, enables me to point out to you some of these advantages and disadvantages. Sea-water has a nearly uniform temperature, rising a degree in July, remaining stationary in August, and sinking gradually in September; it does not follow the atmospheric variations, but remains, on our shores, at from 15 to 20 deg. Cent. (59 to 68 deg. Fahr.); a constancy which it owes to its richness in salt, of which, besides carbonates and sulphates, it contains 25 to 27 grammes (375 to 405 grains) to the litre, and in addition there are bromine, iodine, and organic matter.

Speaking generally, cold baths produce at first a more or less acute sense of oppression; the respiration and circulation become slower, the skin blanches, the blood rushes to the central organs, especially to the head. After a few seconds, this is succeeded by an agreeable reaction; there is a sensation of relief, the circulation quickens, the skin becomes warm and pink, and the respiration deepens. This reaction varies with age, temperament, and general health; but if it do not occur there is a secondary rigor with a sense of oppression, even greater than that on entering the baths. In children who are too young, or too delicate, or in old people, or if one merely stay in the sea too long, this secondary rigor is not uncommon. It causes an injurious loss of heat, with congestion of the internal organs.

After the bath, you may observe a general lassitude, and what is of much more importance, nervous excitement depending upon the afflux of blood to the brain. When the baths are properly indicated, these consecutive phenomena are little marked, and diminish after a few times, while in the interval the strength increases, appetite becomes keener, digestion more easy, the circulation of lymph and blood more rapid, the pulse larger and fuller, the subcutaneous tissues firmer, and the lymphatic glands diminish in size.

In children, and especially in little girls, constipation is not an uncommon occurence, and, if not attended to, is likely to prevent the good result which might be otherwise expected. Diarrhœa at the sea is not the result of sea-bathing, but of bad water or seasonal influences.

It is well to direct the attention of parents to these two points: constipation and cerebral excitement. If they be not attended to, the head becomes heavy, the temper sharp, the nervous susceptibility extreme, the appetite diminished, and the regular action of the digestive organs seriously deranged.

Warm Salt Baths.—With tepid or warm sea-water the congestive action is much diminished, but not altogether prevented; and its effects may be observed on the circulation, the respiration, the nervous system, and, in females, on the genito-urinary organs. With respect to the latter, women with congestion of the genito-urinary apparatus are bad subjects for sea-bathing of any kind.

In addition to the influence of the sea-bath, we must not forget the exciting action of the saline atmosphere, which is especially noticeable in nervous children, their sleep becoming disturbed, and their attacks more violent and frequent. The subjects of hysteria and epilepsy are generally made worse by sea-air.

Among the chief contra-indications to sea-bathing are the extremes of age; before 2 years and after 50 to 55 sea-bathing should be forbidden, but washing with warm sea-water may be permitted. 'Do not send to the seaside those irritable subjects, children in whom you observe what is called cerebral irritation, the children of hysterical or epileptic parents. Even without bathing, the sea-air excites them; and many attacks of congestion, and even

* The Diseases of the Blood-Vessels of the Ovary in Relation to the Genesis of Ovarian Cysts. (*Amer. Journ. Obstet.*, vol. xiii, p. 1.)

meningitis, have arisen thus. Amongst adults, do not allow bathing to plethoric subjects of apoplectic tenderness, nor to patients with cerebral or spinal diseases.' Chorea should only be sent to the sea when the nervous symptoms have disappeared, at which time the debility resulting may be much improved. Hysteria and epilepsy have been already spoken of. Rheumatism, cardiac disease, albuminuria, and Bright's disease, are all equally better away from the sea. The same is true of all cutaneous affections, ophthalmias, and chronic inflammation of the mucous membrane of the external auditory meatus. In cancer and tubercle, little good can be hoped for. In many cases harm results; in some cases of tubercle there is undoubted benefit, but such cases are exceptions.

Cases of chronic catarrhal bronchitis, emphysema, and asthma, should not be sent to the sea-side. Finally, young girls with ovarian pain and dysmenorrhœa should be recommended sea-bathing with great caution, on account of its liability to produce pelvic congestion. The principal indication for sea-bathing is scrofula; scrofulous enlargements of glands, scrofulous joints, especially white swelling, scrofulous ozæna, chronic scrofulous bronchitis; also rickets, chlorosis, the anæmia produced by dwelling in large towns, atonic dyspepsia, infantile paralysis, and the paralysis of convalescence. All children benefit by going to the sea, except those in whom the contradictions already noticed exist.

ROBERT SAUNDBY, M.D.

GOLGI ON THE CENTRAL ORIGIN OF THE NERVES.

IN a paper read in the Anatomical Section of the Medical Congress, held in Genoa in Sept. 1880, and published in the *Giorn. Internaz. delle Scienze Med.*, 1881, Fasc. 3, Professor Camillo Golgi gives the results of observations which he has made on the relation between the nerves and the ganglion-cells of the brain and spinal cord.

He commences by referring to the present imperfect and unsettled state of our knowledge respecting the mode of connection between the ganglion-cells and nerve-fibres; and selects for special remark the doctrine founded on the researches of Deiters, Schultze, Koschewnikoff, and Gerlach, that the ganglion-cells give origin to nerve-fibres in two essentially different ways, viz.: 1. directly, by means of a special prolongation which goes to form the axis-cylinder of a nerve-fibre; 2, indirectly, through the medium of a network, formed on the one hand by the subdivision of so-called protoplasmatic extensions of the cell, and on the other by similar subdivision of the axis-cylinder of the nerve. This opinion, however, he holds not to be based on anatomical facts; and he has carried out a series of researches, with the result, he believes, of settling the question of the origin of the nerve-fibres as soon as some matters of secondary importance shall have been determined. Reserving to a future occasion a detailed account of his investigations, with appropriate figures, he at present simply enumerates the facts which he has observed.

There are indeed, he says, certain secondary morphological differences in the mode of origin of the nerves in the different parts of the cerebro-spinal axis; but with regard to the essential relation between the ganglion-cells and the nerve-fibres, there are constant laws and an absolute correspondence everywhere. Nerve-cells may be distinguished by an expert observer from other cellular elements by the form, appearance, and their prolongations and the mode of their ramifications: but he holds that none of these characters can be regarded as absolute, and that it is often impossible to determine by them whether a cell belongs to nervous or to connective tissue. The only absolute characteristic of a nerve-cell is the presence of a prolongation, always single, different from all the others, which becomes continuous with one or more nerve-fibres. The so-called protoplasmatic prolongations are neither directly nor indirectly connected with nerve-fibres; they are, on the other hand, intimately connected with the blood-vessels and the connective-tissue cells, and are probably the means of transmission of nutritive material to the ganglion-cells.

The nerve-cells of all the divisions of the central nervous system, without exception, are connected with nerve-fibres by one only of their prolongations (generally called Deiters' or the axis-cylinder prolongation, but which Dr. Golgi calls the nervous prolongation). From this point of view, all the central nerve-cells must be regarded as unipolar. Contrary to the statement of Deiters and other anatomists, Dr. Golgi holds that the prolongation does not remain single, becoming connected with one nerve-fibre alone, but that in general it divides, at a greater or less distance from its origin, into a number of filaments which are in connection with an equal number of nerve-fibres. He believes that, while some of the nervous prolongations go directly to the nerve-fibres, perhaps giving off some lateral filaments, others form a diffuse nervous network. From a study of the distribution of the cells, he believes that those cells whose prolongations pass direct to the nerves are motor or psycho-motor, while those which give use to a network are sensory or psycho-sensory.

The network above referred to exists in all the layers of grey matter in the central and nervous system, and consists: 1. of fibres emanating from the nervous prolongation of cells of the first category (motor cells); 2. of prolongations from cells of the second category (sensory); 3. of fibres emanating from the axis-cylinders of nerve-fibres, which enter the grey matter and become continuous with the prolongations of the cells of the first category; 4. of axis-cylinders which break up altogether into very fine filaments and aid in forming the network.

Professor Golgi believes that the connection formed between the motor and sensory fibres through the participation of axis-cylinders of motor nerve-fibres in the network, affords an easy explanation of the phenomena of reflex action.

These general laws of the origin of nerve-fibres are founded on minute examinations of the spinal cord, cerebellum, and brain. While, however, there is a general correspondence between the several parts of the central nervous system in regard to the matters above referred to, there are sufficiently notable differences in other parts, such as the form, size, and arrangement of the ganglion-cells, and the course and destination of the nervous prolongations from them. In the present place, Dr. Golgi gives the following summary of the results of his researches on the spinal cord.

1. All the ganglion-cells of the spinal cord, without exception, are provided with a spinal prolongation, by means of which they come into relation with nerve-fibres.

2. The ganglion-cells, both of the anterior and

posterior cornua, and of the intermediate zone of the spinal cord, are in relation with nerve-fibres through one only of their prolongations, which Professor Golgi terms the nervous prolongation. Hence, viewed with regard to their special functions, all the nerve-cells of the spinal cord may be considered to be unipolar.

3. The differences between the cells of the grey matter of the spinal cord, as to their form, size, and the mode of ramification of their prolongations, are of secondary importance, and probably inherent to local conditions of development: the only difference of importance consists in the manner of disposal of the nervous prolongation.

4. In relation to the disposal of the nervous prolongation, two types of ganglion-cells may be distinguished in the grey matter of the cord: (*a*) Cells whose nervous prolongation is broken up into very fine fibrils, and is occupied entirely in the formation of a diffuse nervous network; (*b*) Ganglion-cells whose nervous prolongation, perhaps with the addition of some fibrils, maintains its individuality, and goes to form the axis-cylinder of a nerve-fibre.

5. The fact that cells of the first type are generally met with in the zone of distribution of the posterior nerve-roots (posterior cornua in general, and especially the *substantia gelatinosa* of Rolando), while those of the second type are found principally in the range of distribution of the anterior roots, suggests that the former are connected with sensation, and the latter with motion. This supposition receives much support from the fact that in other regions of the central nervous system, such as the more superficial layers of the corpora bigemina, where fibres which are beyond doubt sensory (those of the optic tract) are distributed, cells of the first type are found exclusively, or at least greatly predominate.

6. The grey substance of the spinal cord contains a diffuse nervous network, which passes through the medulla oblongata, and is continuous with the fine nervous network which exists in all the layers of the grey matter of the brain. As far as regards the spinal cord, this network appears to be composed—(*a*) of fibrils, resulting from the complex subdivision of the nervous prolongations of the ganglion-cells of the *substantia gelatinosa* of Rolando, and of a part of the ganglion-cells of the posterior cornua, properly so-called; (*b*) of nerve-fibres of the posterior roots, which subdivide in identically the same manner as the above-named prolongations: (*c*) of fibrils emanating from those nervous prolongations which, nevertheless, preserve their individuality (cells of the anterior cornua, some of the cells of the posterior cornua, and others dispersed here and there in the intermediate zones): (*d*) of fibrils emanating from the nerve-fibres of the anterior, posterior, and lateral columns, and entering obliquely or horizontally into the grey substance, where they subdivide in exactly the same manner as the fibrils derived from the nervous prolongations.

7. Any argument on an anatomical basis as to the functions of a ganglion-cell or of a group of such cells in the spinal cord, must be founded solely on a consideration of the appearance, course, and relations of the nervous prolongations.

8. In the grey substance of the spinal cord, in general, it is not possible to give a precise topographical description (as most histologists have desired to do) of the groups of ganglion-cells, since there are very great differences even in closely adjacent regions; on the other hand, such a grouping would be irrational, since it can only be said, from a consideration of the course, appearance, and relation of the nervous prolongations, that a certain physiological destination corresponds to the individual groups in one locality or another. It may not unfrequently be observed that cells lying in close proximity send their nervous prolongations in opposite directions, evidently to separate destinations. For instance, Dr. Golgi has noticed that, of two cells lying in the neighbourhood of the lateral columns, and almost in contact, one sent its nervous prolongation in the form of an arch to the corresponding lateral column, while the nervous prolongation from the other passed through the anterior commissure into the grey matter of the opposite side.

9. Since it is at present impossible to formulate any general laws as to the distribution of the groups of ganglion-cells, and the destination of their nervous prolongations, all that can be now done is to take account of the greatest possible number of special cases, in the hope that these, co-ordinated with others, may perhaps serve as a basis for such laws.

Regarding the appearance and course of the nervous prolongations, Dr. Golgi is able to furnish the following facts.

To the first category of ganglion-cells—those of which the nervous prolongation subdivides, forming a network—belong (*a*) the cells of the *substantia gelatinosa* of Rolando; (*b*) a large number of the cells belonging to the zone of grey substance situated in front of the *substantia gelatinosa* (the posterior cornua properly so-called); (*c*) some cells irregularly scattered here and there in the zone lying between the anterior and the posterior cornua, some belonging rather to the anterior cornua.

To the second category of cells, those whose nervous prolongations, while giving off some fibrils to form a network, go to form the axis-cylinder of nerve-fibres, belong (*a*) the great majority of the ganglion-cells of the anterior cornua: (*b*) similar cells belonging to the posterior cornua properly so called; (*c*) other cells situated in the zone lying between the two preceding, and especially those in the neighbourhood of the lateral columns.

With regard to the course and destination of the nervous prolongations of the cells of the second category, Dr. Golgi has made the following observations.

(*a*) The majority of the ganglion-cells of the anterior cornua send their nervous prolongations, sometimes pretty directly, sometimes after a very irregular coil, into the anterior columns and roots: a not inconsiderable number of them, however, send their prolongations through the anterior commissure into the columns of white substance on the opposite side; while some of the cells of the anterior columns send their prolongations into the lateral and antero-lateral columns.

(*b*) Of the cells in the posterior cornua, Dr. Golgi has seen some sending their prolongations into the postero-lateral columns, some into the lateral columns: and in some cases he has seen nervous prolongations in the region of the anterior cornua, without being able to trace them to their ultimate destination. In some cases, he has found that the nervous prolongation of cells of the posterior cornua of one side passed through the anterior commissure, and became connected with the nerve-fibres of the anterior columns of the opposite side.

(*c*) The nervous prolongations of a group of cells situated at the side of the central canal were seen by Dr. Golgi to pass in predominating numbers to the anterior column of the other side through the

anterior commissure; while some of them were traced to the lateral columns of the corresponding side.

(*d*) The cells in the zone of grey matter lying nearer to the lateral columns mostly send their prolongations into these columns; but not a few of the prolongations pass through the commissure to the opposite side of the spinal cord.

Dr. Golgi says that the prolongations from the cells of the anterior and posterior cornua, and of the intermediate zone, which pass through the commissure, give origin in their course, sometimes before reaching the commissure, sometimes within or beyond it, to fibrils which go to form the network above mentioned. He has not always been able to convince himself that the nervous prolongations passing through the commissure became actually connected with the columns of the opposite side; in some cases, it appeared to him that the prolongations were subdivided into numerous fibrils, which formed part of the network. But he intends to make more minute remarks on this subject.

A. Henry, M.D.

ERB ON THE REFLEXES.*

Although physiologists have busied themselves extensively with the study of reflex action in general, that branch of the subject which is of practical diagnostic value has been comparatively neglected. There is room for much valuable work even on the healthy subject, upon the reflex movements brought out by the stimulation of various parts of the body; and to the practical physician the subject is one of great importance.

The principal reflexes of diagnostic value are the skin, tendon, pupil, palate, and sphincter reflexes.

Skin-Reflexes.—These are limited in health to certain parts of the body.

The reflex movement produced by tickling the *sole of the foot* is best seen in children and in 'nervous' people. It varies greatly within normal limits, and with these variations it is necessary to become familiar before drawing diagnostic conclusions. This reflex is best tested by drawing the finger-nail or the handle of a percussion-hammer quickly from toe to heel. The result, as seen on the healthy man used for illustration, is a contraction of the quadriceps extensor. A slight contraction appears also in the muscles on the front of the leg, so that the foot is flexed as well as drawn away. In the foot itself no reflex is seen. This is the only normal skin-reflex about the foot, except sometimes a slight contraction when the dorsal surface is pinched.

Cremaster reflex.—On stroking the anterior and internal surface of the thigh, a contraction in the cremaster muscle is seen to follow, by which the testicle is elevated. In a similar manner, the scrotal muscles contract when we pinch the skin of the scrotum. These contractions are, under abnormal conditions, much decreased, and are normally more marked in boys than in adults.

The *abdominal reflex* is best tested with the patient lying down, as the abdominal muscles in the erect position are very tense. The abdomen should be unexpectedly stroked, and will immediately retract. This reflex is easily wearied by a few repetitions.

Mammillary reflex.—In the normal subject, the nipple on being stroked becomes hard and elevated, that is, assumes a state of erection. At the same time, the areola is drawn together.

Palpebral reflex is tested by approaching the eye quickly with the finger or by stroking the cilia. Under pathological conditions the conjunctiva may be touched to determine if palpebral reflex exist, though of course in health this stimulus is never necessary.

The foregoing are the only skin-reflexes found in the normal subject. In disease they may be wanting on the one hand, or increased on the other, and new skin-reflexes may be developed.

Tendon-Reflex.—The value of the tendon-reflex in diagnosis was discovered in 1876, since which time the literature on the subject has multiplied rapidly. This phenomenon is produced by the stimulation of certain tendons, for example, that of the quadriceps extensor femoris. That the reflex is produced by stimulation of the tendon, and not of the skin, is easily shown on animals by removing the skin over the tendon; on man, by pushing the skin over the tendon to one side and stimulating it. This reflex appears in the healthy subject on stimulation of the tendon of the quadriceps femoris, of the triceps, and of the tendo Achillis.

Patellar tendon-reflex.—This is by no means easy to demonstrate in all cases in which it exists. The knee of the leg to be tested is crossed over that of the other, and the leg allowed to hang down with no muscular effort on the part of the patient. This position is preferable to the recumbent, for in the latter position the tendon is relaxed, the reflex being in all cases best obtained when the tendon is slightly stretched. A short, sharp, light stroke is given with a percussion-hammer on the tendon, just below the edge of the patella. The result in health is a contraction of the quadriceps muscle. The great difficulty to contend against is involuntary muscular effort on the part of the patient. The phenomenon is in health almost constant; but, as it is wanting in one and a half to two per cent. of normal subjects, its absence cannot be taken for an absolute sign of disease, which is an important fact to bear in mind. The patellar reflex may be, in disease, increased to such a degree that the least touch calls out a series of clonic contractions, or it may, on the other hand, be entirely wanting. It is wanting in tabes dorsalis, for example, and in atrophic paralyses, either of peripheral or of spinal origin. It is generally increased in cases of spinal lesion in the dorsal region.

Reflex of the tendo Achillis is tested as follows. The foot is held at a right angle to the leg, in order that the tendon may be slightly stretched. The tendon is then struck lightly, about two and one half finger-breadths above the apex of the heel. A slight extension of the foot results in the normal subject. About the lower extremities there are no more normal tendon-reflexes, except sometimes a slight contraction of the adductors on striking the inner surface of the thigh.

Triceps reflex.—This is called out by striking the tendon just above the elbow, the arm being held in a position of flexion. A slight reflex may be sometimes found in the biceps and in the flexors of the wrist, on striking their respective tendons. These reflexes are, however, very inconstant in health. In disease they may be very marked.

Here is a patient with an organic central lesion. He has a spastic gait, his legs are stiff, and he almost hops on his toes. In a patient with this gait, we generally find exaggerated reflexes. On attempting to bend his knee we find a powerful resistance due

* Notes from one of Professor Erb's Lectures on the Diagnosis of Diseases of the Nervous System. Leipzig. By Geo. L. Walton, M.D.

to involuntary muscular contraction. We find an immense reflex following the slightest stroke on the tendon, not only below the patella, but even above it, over a triangular space which represents the spreading of the tendon. This reflex is in some cases so much exaggerated, that one stroke is followed by a series of clonic contractions.

In such a case as this one, the reflex of the tendo Achillis is best tested by holding the foot in the hand with the thumb to the dorsum of the foot. The foot is now bent with a quick jerk towards the knee, and pressed firmly, though not too forcibly, upward. The result is a series of contractions, each relaxation being followed by a fresh stimulus as long as the foot is held firmly upwards. The fact that this stimulus is enough to keep up the reflex, is in itself evidence of a pathological condition. This phenomenon is in some cases best demonstrated by holding the foot in a position of abduction, in others of adduction. The phenomenon is almost never to be produced in health, though in persons with weak nerves two or three contractions may follow. When, therefore, as in this case, a distinct series of contractions follow, a pathological state is almost surely diagnosticated, probably an organic lesion in the cord or brain.

As we proceed in the examination of the case before us, we find that striking the inner surface of one thigh calls out contractions in the adductors of both thighs. A reflex also follows stimulation of the tendo tibialis postici as it passes the inner malleolus; also of the peroneal tendons as they pass under the outer malleolus; also that of the tibialis anticus as it passes over the ankle. Reflexes from the biceps and from the wrist flexors are marked. In this patient the plantar, abdominal, and mamillary reflexes are well shown.

The number of muscles exhibting the reflex phenomenon may be in pathological cases much increased; the deltoid, the scapular, and the dorsal muscles, for example, being included.

PUPIL-REFLEX is of great diagnostic value, and is exhibited in two ways:—by narrowing on stimulation by light, and by widening on stimulation, for example, of the skin.

Pupil-reflex to light.—The patient is placed facing a window, and the hand of the observer is placed over the eye. On the sudden removal of the hand, the slightest contraction of the pupil is noticed. The eyes should not be *closed* by the hand, or its removal may be followed by a contraction of the pupil, due to the effort of accommodation, which must not be confounded with the contraction due to the stimulation of the light. This accommodative effort of the pupil, which is not a reflex phenomenon, may be separately tested by directing the patient to look first at a distant, then at a near object.

Pupil-reflex to other stimulation than that of light.—In sleep the pupils are very small. Let a person be suddenly awakened by a loud noise or other stimulus, and an extreme dilatation occurs. A similar dilatation may be brought about by a sharp stimulus to the skin. Let the patient look fixedly on a certain spot, say the observer's coat. If, now, the skin at the back of the patient's neck be pinched, a widening of the pupil ensues. The same reflex may be brought about by a strong faradic current, one electrode being placed at the back, and the other at the side of the patient's neck.

PALATE-REFLEX.—While the patient is breathing as quietly as possible, with the mouth open, the palate may be touched with the end of a pen-holder. If the part is in the normal condition a retraction follows.

For the sphincter reflexes, we must depend in great measure on the history of the patient.

The reflex acts of coughing and sneezing may be tested if desirable, the former by powders blown into the larynx, or by observing the patient while choking, the latter by snuff or other irritating substance.

In pathological cases, a great variety of new reflexes appear, some following upon external stimuli, others upon natural acts of the patient. As an example of the latter, patients are seen, in whom the passage of a stool is followed by clonic contractions in the muscles of the legs.

Among the many illustrations of reflex acts following external stimulus may be mentioned vaginismus, also micturition brought about by the pain of introducing a catheter. In one patient with decubitus, washing the sore always induced an act of defecation. An interesting example of abnormal reflex action was seen in the patient, who, though paralysed from the neck downwards, made a movement with his arm to remove the catheter on every attempt at introduction.

POOLEY ON ANOMALIES OF PERSPIRATION.

Dr. J. H. POOLEY (*Ohio Med. Rec.*, Nov. and Dec. 1880, and Jan., Feb. and March 1881) writes as follows. The various anomalies of perspiration may be included under hyperidrosis, bromidrosis, chromidrosis, hæmidrosis, urinidrosis, phosphoridrosis, and anidrosis, or, in other words, excessive, odorous, coloured, bloody, urinous, phosphorescent, and deficient sweat.

1. *Hyperidrosis.*—Synonyms: Idrosis or Hydrosis Sudatoria, Ephidrosis, Polydrosis, Hydropidrosis, Hypercrinia Sudoralis, Excessive Sweating. By these various terms is designated a condition or disease which consists essentially in excessive secretion from the sudoriparous glands, without any perceptible change in their structure. It may be general, but except when it occurs as a concomitant of certain well-known diseases, such as phthisis or rheumatism, it is more commonly local, as of the hands or feet, or partial, being confined to a portion of the body, as one side, when it is called unilateral. The excessive secretion is in many cases strictly normal; in other cases it is abnormal, having either a decidedly acid or an alkaline reaction. In certain situations it may be fetid, as in the feet. Some of the subjects of this disorder seem otherwise to be in perfect health, but, in the majority of cases some concomitant disease is manifest, the most frequent complications being heart-disease, malaria, and particularly some one of the so-called neuroses; indeed, the weight of evidence is such as to lead us to believe the hyperidrosis itself to be essentially a neurosis of the sympathetic or vaso-motor system. It exhibits all grades of severity, from a slight increase of the secretion to such an excess that it pours in streams from the surface; it may be constant, but is usually more or less intermitting or paroxysmal; and may be increased by various excitements or stimuli, both physical and mental. In some recorded cases, the temperature of the affected part is increased; in others it is decreased. Generally, the annoyance to the patient is confined to the mere presence of the excessive moisture; sometimes disagreeable or painful sensations

are present, such as tingling, pricking, a sensation of bursting, etc.; the general health does not appear to be much affected. The locality of the body from which the sweating comes is very various. The palms of the hands, one side of the head and face, a small area on the point of the chin, the soles of the feet, or one side of the trunk. Sometimes the hands and feet sweat simultaneously, the rest of the body remaining unaffected. [The cases cited are very interesting, but we have no space to give them. —Ed.] In the treatment of this affection—*i.e.*, unilateral and profuse general sweating—the whole round of the materia medica seems to have been tried. Ringer found some form of belladonna useful in a majority of cases, while in a few cases it not only did no good, but did positive harm. It may be used locally in the form of tincture, liniment, or ointment of belladonna, or solution of atropia. The most active internal remedial application or administration of the drug is undoubtedly the hypodermic injection of atropia, in doses varying from 1-100th to 1-50th of a grain. Electricity has been tried, and has been successful in at least one recorded case, while Vignard was successful with sage-tea. In fact, this homely domestic remedy is more worthy of confidence than most practitioners are willing to allow. The addition of alum or sulphuric acid to the sage is said to render the action more prompt and satisfactory. Some use ergot with apparent success, while others do not see any benefit follow the administration of it. The same may be said of the oxide and sulphate of zinc. Pilocarpine hypodermically, in a case of unilateral sweating, was successful in one case and failed in another. Stramonium to intoxication in one case cured a neuralgia and unilateral sweating. The 'sweating sickness' was epidemic in England and spread over the kingdom in 1485; again in 1506; a third time in 1517. On this occasion, it proved rapidly fatal in a few hours. The first shivering fit was regarded as the announcement of certain death, and many who were in apparent health at the noon hour were dead at evening. The fourth and most fatal outbreak began in England in May 1528, and in the following year spread to Germany, where, on account of the great mortality accompanying it, it was the means of settling the dispute between Luther and Zwingle in regard to the Eucharist. This epidemic spread to the Netherlands, Denmark, Sweden, and Norway. Its fatality was much increased by the absurd treatment which was given the sick; the people, fully believing that the patient must sweat for the whole of twenty-four hours if he would recover, put him to bed, covered him with feathers and furs, and closed the room; then, heating the stove hot, kept the patient in what the historian calls a 'rehearsal of hell', until, in an agonising sweat, the poor man gave up the ghost, when perhaps a little refrigerating treatment would have saved him. The fifth epidemic of this singular disease occurred in England in 1551, since when it has not made its appearance as an epidemic. The pathology is not known.

II. *Anidrosis.*—This is the opposite of hyperidrosis, and occurs in the course of certain chronic diseases of the skin. It is particularly noticeable in ichthyosis; also in patches of eczema, psoriasis, and elephantiasis Græcorum; also in elephantiasis Arabum. It may also exist from congenital deficiency of the sweat-glands, in which persons perspire but very little, and sensibly, if at all, only under high temperatures. The treatment of this condition is to restore the health of the skin wherever it is diseased, and then such means as Turkish and other baths, with frictions, may be tried. Of drugs, jaborandi or its alkaloid, pilocarpine, may be used.

III. *Bromidrosis.*—Synonyms: Osmidrosis, Ephidrosis Oleus, Odorous Sweat, Stinking Sweat. Strictly speaking, bromidrosis means sweating of any unusual and offensive odour, and that is the signification of the term in this lecture. However, when the perspiration has a strong smell, it has also a superabundance, and might more properly be called ephidrosis oleus, but this is a compound name, and is usually discarded. The treatment consists in the use of astringents and antiseptics. For bromidrosis localis of the feet, a powder composed of one part of salicylic acid and five of starch may be put into the patient's stockings. Sweating of the thighs and scrotum may also be powdered with the same. The following powder may also be used on the feet. R. Acidi salicylici, gra. x; acidi tannici, gra. xv; talc preparatæ, pulv. iridis florent., āā ʒ ss. M. The daily application of this powder around and under the toes reduced the sweat to the normal and banished the fetid odour. Of the various other methods employed, none seem more promising than the above.

IV. *Chromidrosis.*—Synonyms: Ephidrosis Discolor, Coloured Sweat, etc. Chromidrosis is a rare disease. Of the various colours, yellow is the most rarely met with, except when it occurs as a complication of jaundice. The next rarest is the green, unless it occur from copper poisoning. The commonest hues presented by this chameleon disease are black, brown, and blue. The blue is more properly blue-black generally, but occasionally it is of a real azure hue. The colouring matter in these three forms is probably identical—most likely indican —which, as it normally exists, is colourless, and occurs pathologically in human urine. The indican is believed to be secreted by the sweat-glands in a colourless state, and to be so acted upon by the air as to become oxidised into blue, brown, or black, as the case may be. But the blue may be due to the presence of the protosulphate of iron in the sweat. The red colouring matter of the urine (uro-erythrine) has been found in the perspiration by Landerer; a blue colouring matter allied to cyanine has also been found in the sweat. The amount of secretion in chromidrosis may be very slight, or it may be excessive in quantity. As a rule, the flow is not constant, but appears suddenly, remains for a short time, and then disappears. It may come and go in this manner for weeks or months. It is frequently brought on by excitement, or emotion, or passion; fright is often mentioned as a cause, but it may appear without any exciting cause. As far as known, it is never universal; various regions may be attacked, but it has been noticed most frequently upon the face, chest, abdomen, arms, hands, and feet; the lower eyelids and cheeks seem to be its most favourite seat. But little can be said of the treatment of these cases. In the yellow sweat of jaundice, of course we should cure the jaundice. For the green metallic sweat, get out of the work that causes the metallic poisoning, and get rid of the metal by proper medication. But there is no known specific for the usual cases of chromidrosis.

V. *Hæmatidrosis* is a rare affection. It has always excited the interest and attention of medical observers, and consists essentially of a hæmorrhage from the unbroken surface of the skin. But this hæmorrhage takes place from the capillary system of the sudoriparous glands, and makes its appearance upon the surface through the sweat-ducts. It

is not inappropriately, therefore, called bloody sweat. Its amount varies extremely, from a large amount of thick blood that will clot upon the surface, to a small amount of bloody serum of only passing moment. It may make its appearance upon nearly the whole surface, or it may be confined to some selected regions, generally those in which the skin is thin and delicate. It is often associated with erythematous or vesicular eruptions upon the skin, but quite as often there is nothing of the kind. It has been found in every age and in both sexes. It sometimes appears as vicarious of the menstrual function, but as a general thing this peculiar form of sweat is a matter of no great practical importance, although it may be of great interest as a curiosity. The treatment of this rare affection seems to be mostly to ascertain the cause and treat that, leaving the local affection to be arrested as the general symptoms improve. In case of the bloody sweat vicarious of menstruation, judicious monthly bleeding would seem to be indicated.

VI. *Galactinidrosis* is best noticed by saying that properly there is no such thing, although the older writers insisted that there was such a disorder. Before the microscope revealed so much to the unaided eye hitherto unknown, it was thought that there might be a metastasis of milk, but now no one who is at all well informed even guesses any such thing.

VII. *Urinidrosis.*—The cases of this trouble are few, and only occur where the urinary secretion is defective and the perspiration takes on an urinous odour. It is not yet demonstrated that urea exists in the blood, even in these cases. The perspiration may be general or local.

VIII. *Phosphoridrosis.*—Of all the anomalies of perspiration, this is perhaps the most curious. But few cases are recorded, and of these none seem to belong to America.

[It may truly be said that most of the cases recorded as coming under the various anomalies of perspiration are more curious than practical.—Ed.]

LANGE ON THE PATHOLOGY AND TREATMENT OF CERTAIN FORMS OF NEURALGIA.

An elaborate article on this subject, by Dr. C. Lange of Copenhagen, has been published in the *Hospitals-Tidende*, Series 2, Band vii, pp. 701, 721, 781, 801, 821, and 849.

In several cases of sciatica, where the patient could not submit to a long course of treatment, Dr. Lange had recourse to an old remedy—cauterisation of the helix of the ear, by means of Vienna paste, with strikingly good result. Eight cases in which this treatment was employed are related. In a case of reflex sciatica (from renal calculus), in one of recent peripheral sciatica, and in a very old case, the treatment was without essential influence, with, perhaps, the exception in one case of some temporary alleviation; in the other five cases, very remarkable relief from pain was at once obtained, and continued as long as the control could be maintained, until the case ended, in the course of a short time, in complete or nearly complete cure. The author admits that this treatment is attended with the disadvantage of leaving the ear deformed by scars.

Dr. Lange remarks that neuralgia in the region of the supra-orbital nerve presents a number of peculiarities which are generally not rightly estimated. Thus it presents an usually perfectly regular intermittent type. This is generally attributed to an assumed connection with malarious infection, which, however, the author believes to be by no means the rule, and certainly has not been the case in his experience. Another peculiarity is the tendency of the affection to periodicity. It is very common to see it appear for two weeks or longer, and then cease, returning after the course of several months. Sometimes it appears at certain times of the year. Moreover, the pain appears in many cases on both sides, either being first confined to one side, and then, after the course of some time, being felt in a slighter degree also on the other; or commencing on both sides, and afterwards being limited to one; or, finally, affecting first one side and then the other. It attacks by preference young individuals; but the author has never seen a case under twelve years of age. The prognosis appears to be good, and the action of galvanism (the constant current, the anode being placed over the supra-orbital nerve) is well marked.

Regarding the diagnosis of tabes dorsalis in an early stage, Dr. Lange makes some remarks founded on a considerable number of cases, several of which are related. He gives first a case in which the initial pains were absent; this, however, he regards as being very rare. He next remarks that they by no means always commence in the legs. In the first case related, in illustration of this fact, the pains began in the thorax, and afterwards affected the upper limbs; after this, there were anæsthesia of the chest and dysæsthesia of the hands; in the lower limbs, pains and anæsthesia did not appear until later. In the next case, the patient had for many years only pain in the chest, of a rather vague nature, and not presenting the character of intercostal neuralgia. In another case, there were at first constricting pains about the chest; then followed anæsthesia of the body and upper limbs, and ataxy of the arms; and, later on, pains and ataxy of the lower limbs. In another case, pain and dysæsthesia, and afterwards ataxy, occurred in the arms before the phenomena of the disease were met with in the legs.

Another circumstance which may cause difficulty in making the diagnosis of tabes in the earlier stages is the limitation of the symptoms to one side for some time. This also may be regarded as a rare occurrence; but that it may occur is sufficiently proved by a case related. In this case, the morbid phenomena first appeared in the trunk. Dr. Lange also relates several cases of rapid, truly acute, tabes, not, as is usually the case with the cases described as acute, preceded by a premonitory stage. In one case, the disease appeared after exposure to cold and damp (there was, however, a history of syphilis); in another, the patient was attacked during convalescence from an acute illness. Dr. Lange ascribes no small diagnostic importance to the absence of the knee-phenomenon. He relates, however, a case in which it was abnormally strong. He has had about eighty cases, of which four have been quite cured.

A. Henry, M.D.

TALAMON ON THE CARDIAC LIVER.*

The influence of the heart on diseases of the liver has recently formed the subject of a remarkable thesis by M. Talamon, who studies these facts from

* *Talamon sur le Foie Cardiaque*, 8vo, 64 pp.; Germer Baillière.

the anatomical point of view, but insists on certain clinical considerations of great importance. From the anatomical point of view, M. Talamon demonstrates that in old diseases of the heart cirrhosis of the liver exists very often, and that this cirrhosis starts then, not from the central vein of the lobule, as is generally admitted, but from extra-lobular lesions very analogous to those observed in ordinary cirrhosis of drunkards. Some clinical facts of importance are pointed out by M. Talamon, in relation to cardiac ascites and the determination of cardiac hepatitis by grave icterus. This symptom may, in relation to ascites, be considered in two different manners; most commonly, indeed, the ascites is in proportion to the cardiac disorder, and progresses parallel with other infiltrations. But there is another form of cardiac ascites rarer than the foregoing, of which the interpretation is open to doubt. There is no longer any synchronism between the evolution of peritoneal effusion and that of the œdema of the lower limbs. While digitalis and the regularisation of the cardiac pulsation cause subcutaneous œdema to disappear, ascites persists. Puncture temporarily relieves the ascites, but the effusion is not long before it reappears, and that without any reappearance of the œdema of the lower limbs, and without the weakening of the myocardium being apparently at fault. The cause of this ascites resides in the liver, but it is variously explained. Simple stases of the blood, by interfering with the circulation, perihepatitis, which is almost constant in these cases, and which produces excessive secretion of the periotineal fluid, have alike been suggested. M. Talamon thinks that these cases confirm the existence of cirrhosis such as he has often had occasion to observe, and such as he has described as having much analogous with common cirrhosis. The ascites which occur with these characters indicates, therefore, a peculiar gravity in the state of the patient attacked with the cardiac affection, which is at its point of origin. The icterus which occurs in cardiac cases may also itself be of two origins: sometimes the case is one of simple icteric suffusion of no importance; sometimes, and this is a fact little known, that subicteric tint may become so marked as to constitute deep icteris, and the icterus assumes such proportions, such gravity, that it completely dominates the pathological condition. M. Talamon cites four observations in which a yellowish tint was seen in the course of an attack of a systole, at first in the face and the conjunctivæ, and then extending over the whole body, becoming deeper and deeper in tint, and this icterus terminating more or less rapidly by death, with a general series of symptoms, recalling that of grave. At the same time that the icterus became deep, these patients took on in fact a typhoid aspect, the lips and tongue became dry and incrusted with blood and fuliginous substance. There was continued subdelirium with nocturnal agitation; then supervened a state of semi-coma, the patients remaining immobile, and dorsal decubitus. The coma subsequently became deeper, and they died in this state without fever or convulsions. The liver had at first increased a little in size, and then progressively diminished until it did not measure more than 7 and 5 centimètres over the mammary line. Death occurred in one case at the end of twenty and of thirty days. At the necropsy, atrophic lesions of the liver were found, that is to say, more or less general destruction of the hepatic cells.

Thus, whenever icterus is seen to occur in a patient suffering from a systolic heart-disease, an unfavourable prognosis must be made. For this a condition of systole is necessary; for, if the heart continue to beat regularly, the hepatic circulation being normally performed, there is evidently no reason to fear defect of action in the hepatic cells of icterus may have fatal consequences; but, even in cases where the icterus does not take on a menacing aspect, it must not be forgotten that disease of the liver occuring in an individual whose heart is diseased is a complication requiring to be watched. From the point of view of treatment it should be remembered that, according to Stohl, the best means in the case of hepatic complication consists in the repeated employment of mercurial preparations, which are perfectly well supported by these patients.

LEBLANC AND BOULEY ON PREVENTIVE AND PRESERVATIVE INOCULATION.

This paper (*Revue Médicale*, tome ii, October 1881) was read before the Académie de Médecine in answer and opposition to one read by M. Bouley on the preventive and preservative action of the inoculation of pleuropneumonia, also called Willem's method. M. Leblanc, while maintaining a spontaneous origin of this disease, is opposed to inoculation both as a preventive and a preservative. His reasons are based partly on the report of the French commission of the year 1850, and partly on his experience obtained in some epidemics of more recent date.

During an outbreak of pleuropneumonia in the dairy of M. S. in Auteuil, lasting from December 1879 till October 1880, thirty-three animals were inoculated, but only twelve escaped the disease, and so did two that had not been inoculated. During an invasion by pleuropneumonia of the stables of the school of Alfort, in November 1880, the inoculation had no effect in staying the plague; the majority of the beasts had to be slaughtered. In the neighbourhood of Melun, a farmer had a herd of 120 fine Normandy cows, which had been recently contaminated by six Flemish cows newly acquired. M. Trosbut advised the inoculation; 112 cows were inoculated; all without exception had to be killed or handed over to the butcher.

The veterinary surgeon Villeyn inoculated at Ecloo on the 27th June a whole stable; the epidemic nevertheless persisted, and five animals had to be slaughtered. Finally, the town of Hasselt, the birthplace of Willem's method, *i.e.*, of inoculation, is just the place where the disease makes the greatest ravages.

In answer to M. Leblanc and his negative results of the inoculation, M. Bouley, in a paper read before the academy (*La France Médicale*, October 4, 1881), mentions the undoubtedly positive results obtained by himself, M. Chauveau, and others. Animals inoculated with pleuropneumonia have been made immune against the disease.

M. Bouley then goes on to give the results of the experiments by MM. Arloing, Cornevin, and Thomas on symptomatic charbon recently carried out at Chaumont, and witnessed by M. Bouley in his official capacity. They found that, by injecting the bacterial virus of this malady into the tissues, the disease is produced in its fully developed form; while by injecting it into the vein, the animal, beyond a slight and passing fever, does not develop the characteristic external tumours, but immunity is nevertheless hereby conferred.

E. Klein.

HAMILTON ON SPONGE-GRAFTING.

Mr. D. J. Hamilton (*Edin. Med. Jour.*, Nov. 1881), as the results of his investigation into the mode of organisation of blood-clot, has suggested the application of pieces of aseptic sponge, to fill cavities in old ulcers and other wounds with granulating surfaces, and has succeeded in obtaining organisation, and filling of the cavities, with healing of the wound. He prepared the sponge by dissolving out the siliceous and calcareous salts, by means of dilute nitro-hydrochloric acid, subsequently washing it in liquor potassæ, and finally steeping it in 1 to 20 solution of carbolic acid in water. The sponge was made to fit the wound very accurately, and was inserted beneath the undermined edges. A piece of green protective was placed on the surface, and above this lint soaked in a 1 to 2 solution of carbolic acid in glycerine, with a little tincture of lavender in it. The whole was covered with a pad of boracic lint. Dr. Woodhead, a pupil of Mr. Hamilton, carried out some experiments at his request, in Prof. Stricker's laboratory at Vienna, on the organisation of sponge, by inserting pieces of sponge in the peritoneal cavity, and between the muscular fibres of rabbits. From these experiments it appears that the pores of the sponge are at first filled with fibrin and leucocytes, and later on become vascularised by the protrusion into them of capillary loops, with the formation of spindle-cells and connective tissue. Giant-cells were frequently present. Mr. Hamilton contends that the vascular loops so protruded are not newly formed vessels, but simply the original capillary loops of the neighbouring tissues pushed by the pressure of the blood current into the empty pores, and that the organising cells are derived, not from leucocytes, but from the fixed connective corpuscles of the neighbouring tissues. Robert Saundby, M.D.

PTOMAINES.

Under this name a class of bodies has recently attracted the attention of toxicologists; and it will be well to summarise the observations which have led up to the discovery and recognition as a distinct class of those alkaloidal products of decay and putrefaction. An interesting summary of the observations already published on this class of bodies is given by Th. Husemann in a recent number of the *Arch. der Pharm.*, an abstract of which is contained in the *Jour. of the Chem. Soc. of London*, 1881, p. 57. Panum first showed that, by the putrefaction of albuminous substances, a soluble ferment is produced, insoluble in alcohol, withstanding the temperature of 100 deg. Fahr., and highly poisonous. Fagge and Stevenson also showed (*Proc. Royal Soc.*, 1865; *Guy's Hospital Reports*, 1865) that the alcoholic extracts of many *post mortem* liquids, even after exposure to the temperature of the water-bath, are possessed of toxic properties. Bergmann confirmed Panum's observations, and described a definite body, *sepsine*, as a product of fermentation. The researches of Panum and Schweninger showed further that, at different stages of decay, compounds varying in their physiological actions are generated.

Sonnenschein and Zuelzer discovered in poisonous sausages, and also in an anatomical maceration fluid, a peculiar alkaloid, resembling atropia in its physiological action; and they also noticed among the products of decay a substance which produced tetanic convulsions. The probable relation of these products of putrefaction to certain diseases is shewn by the fact that Sonnenschein's alkaloid is found in the bodies of patients dying from continued fever; and individuals who have eaten decomposed food and been poisoned thereby, often show typhoid symptoms.

Lembroso and Erba showed that decomposed poisonous maize produced tetanic symptoms, and that the maize contained alkaloidal bodies. The tetanus is sometimes associated with, or masked by, narcosis, and with this may be associated the observation of Ranke, that the physiological action of impure strychnia extracted from putrefied corpses may be masked by ptomaines.

Ptomaines, discovered and named by Selmi, are alkaloids, generated during decay, and closely resembling the vegetable alkaloids, not only in their physiological effects, but also in their chemical reactions. Some ptomaines appear to be poisonous, others to antagonise known poisons, as Ranke's observations show; whilst others, again, appear to possess no marked physiological activity. That the ptomaines are not exclusively *post mortem* products has been shown by Spica, who obtained no fewer than four ptomaines from the fluid taken during life from a patient in a case of peritonitis; all were poisonous, though one only was so in minute doses, and the effects of this resembled those of curare.

Lembroso thinks that the tetanic and narcotic action of extract of putrefied maize, and its beneficial action on several skin-affections, point to the possible origin of pellagra in diseased or putrid maize. This would explain the prevalence of pellagra in the South European maize-growing countries; and assigns its cause to ptomaines. It is undoubted, however, that non-alkaloidal, and probably more or less toxic bodies, are produced during putrefaction, besides ptomaines. Thus lactic acid, and alkaline lactates, are formed during the putrefaction of maize; and Aeby and Schwazenbach detected a compound ethereal salt in the extract of dead bodies.

Ptomaines are usually produced in substances which, after brief exposure, have been excluded from access of air, as in buried corpses, the internal viscera, sausages, and tinned foods; and then chiefly in the interior of the article. Cases, however, are known where similar principles have been present in comparatively fresh substances, which have been constantly exposed to air; and hence we must include under the name 'ptomaines' all alkaloidal products of decay, whether formed in the presence or in the absence of air. It is interesting to note that all animals are, apparently, not equally susceptible to the action of ptomaines. Thus, it is well known that putrefied flesh may be eaten by dogs with impunity. Jansen, who has described pretty fully the chemical and physiological properties of the poisonous ptomaines, states that the chief symptoms produced by them are contraction at first, followed by dilatation of the pupils; retardation of the heart, followed by irregularity in its beats; and convulsions. Selmi, and afterwards Brouardel and Boutmy, detected a ptomaine in the bodies of persons who had died from the effects of arsenious acid; and the latter observers have also found ptomaines in the organs of a person who had succumbed to carbonic oxide. They also state that each case of putrefaction does not give rise to a distinct ptomaine; for they found the same ptomaine after poisoning by prussic acid and carbonic oxide respectively.

Since ptomaines present in general the leading

properties, physical and chemical, of the vegetable alkaloids, as veratria, morphia, and codeia, they may readily be confounded with these. The proper mode of distinguishing between the two classes of bodies is to determine all the chief chemical and physical properties of the isolated base, and to compare these with those of the vegetable alkaloid whose presence is suggested. Unfortunately this can rarely be done, from lack of material to work upon. Hence Brouardel and Boutmy have endeavoured (*Comp. Rend.*, 92, p. 1056; *Ann. d'Hygiène*, tome v, p. 497) to find means sufficient in all cases to disclose the nature of the alkaloid extracted; and they think they have discovered such by making use of potassium ferricyanide and silver bromide as reagents. If a base be present, indicated by the formation of a precipitate with potassium iodo-mercurate, and this instantly change potassium ferricyanide into ferrocyanide, giving a precipitate of Prussian-blue on the addition of ferric chloride, a ptomaine is present; whereas precipitation by the iodo-mercurate, coupled with non-reduction of the ferricyanide to the ferrocyanide, shows that a vegetable alkaloid is being dealt with. Morphia and veratria, of the vegetable alkaloids are exceptions to the above reaction. Other vegetable alkaloids reduce the ferricyanide slowly; and certain artificial bases containing methyl and phenyl radicals also reduce the ferricyanide instantaneously. In applying the test, the alkaloid is converted into sulphate; and the solution is then tested with potassium iodo-mercurate to ascertain whether a basic substance be present. If so, a few drops of the solution of the sulphate are placed in a watch-glass containing a little solution of potassium ferrocyanide; and a drop of solution of ferric chloride is then added, when, if a ptomaine be present, a precipitate of Prussian-blue is produced. Gautier has confirmed the results of Brouardel and Boutmy; whereas Tanret (*Comp. Rend.*, 92, p. 1160) finds that ptomaines produce the above results only slowly, and as vegetable alkaloids also reduce the ferrocyanide slowly, the test is in a measure invalidated. Brouardel and Boutmy have, however, supplemented it by another —the reduction of silver bromide. If a piece of photographic paper imbued with the bromide be written upon with a quill pen dipped in a solution of the base, and the paper be placed in a dark room, and then washed successively with sodium hyposulphite and water, the characters traced upon the paper will be made manifest by reduction which has occurred, if a ptomaine be present.

THOMAS STEVENSON.

RENZI ON IODIDE AND BROMIDE OF POTASSIUM IN HEART-DISEASE.*

AN interesting review of an article on this subject, in the *Italian Medical Gazette* of January 1881, appears in the *Lyon Médical* of 10th July 1881. The writer of the article (Professor Renzi) has evidently studied with care the actions of three important drugs largely used now-a-days in cases of heart-disease—viz., bromide of potassium, iodide of potassium, and chloral-hydrate; and he has given some important information regarding them. Bromide of potassium is shown to have such a direct influence on the heart and capillaries, as to entitle it to a high position among the cardio-vascular drugs. According to Dr. Dujardin-Beaumetz, who considers it one of the best heart-tonics we possess, the bromide, besides being a nervine sedative, acts directly on the heart, and lessens considerably any irregular action of that organ. He says that, as a nervine sedative, the drug is useful in counteracting the sleeplessness which so greatly enfeebles and wears out patients suffering from heart-disease, while its value in such cases is greatly enhanced by its direct beneficial action on the diseased organ itself. According to Professor Sée (largely quoted, along with Dujardin-Beaumetz, by the writer of the article), bromide of potassium is especially useful in heart-affections where we have diminished arterial pressure, rapid and irregular action of the heart, passive congestions, œdema, cyanosis, dyspnœa, and sleeplessness.

Iodide of potassium is shown to be very beneficial in dyspnœa arising from heart-disease. It is also of great value in arresting degenerative changes in the heart-tissue. The action of chloral-hydrate on the heart, as observed by Professor Renzi, is at once to diminish the rapidity of its action, and after a time to reduce its energy. The drug seems to act on the heart, by paralysing either the cardiac ganglia or the vaso-motor centres in the brain. The researches of Claude Bernard, Rokitansky, and others, would indicate that the latter are chiefly affected by the administration of chloral, for they found that it caused great diminution of blood-pressure by dilatation of the capillaries.

In summing up his observations on the three drugs referred to, Professor Renzi says of bromide of potassium that it lessens the anxiety of patients suffering from heart-disease, gives them a certain sense of comfort, and enables them to breathe freely. Under its influence sleep is more easily obtained, is more tranquil, and of longer duration than when induced by other drugs. It is, moreover, a more natural sleep. The bromide reduces undue rapidity of the heart's action and of respiration. Cough, however, seems to be aggravated by the use of bromide of potassium alone.

Of iodide of potassium, he says that it is a most useful drug in diseases of the heart. One of its chief effects is a complete relief from dyspnœa and all asthmatic symptoms. Chloral-hydrate is not much esteemed by him. It can procure sleep of a kind, but is of no use in relieving the dyspnœa so troublesome in cases of heart-disease. It is, moreover, dangerous when given in conjunction with iodide of potassium, the latter drug apparently having the effect of greatly increasing its soporific action.

From Professor Renzi's summing up, it would seem that a combination of the iodide and bromide of potassium is a most beneficial remedy in cases of heart-disease.

*Translated in *Glasgow Medical Journal.*

DA COSTA ON ERGOTINE IN THE SWEATS OF PHTHISIS.

PROFESSOR J. M. DA COSTA, in a clinical lecture (*Medical News and Abstract*) delivered at the Pennsylvania Hospital, after passing in review various remedies which he had employed against the sweating of phthisis—atropia, salicylic acid, muscarine, picrotoxine, Dover's powder, oxide of zinc, the mineral acids, Calabar bean, etc.—pronounces in favour of ergotine as the remedy best calculated to relieve this troublesome complication. A great many of the agents employed in this condition are given empi-

rically, though some take into account the supposed pathology of the sweats, and apply the fine experimental therapeutical research of the laboratory to the benefiting of a serious symptom. The latter method might be followed with more accuracy were the pathology of the occurrence better understood; if it were known how it is that the morbid conditions act on the sweat-centres which are so profoundly disturbed. Both physiology and pathology are in this matter of sweating, alike in health and in disease, still a good deal in the dark, notwithstanding such excellent observations as those of Luchsinger, Nawrocki and Vulpian, and the increasing knowledge concerning the sweat-centres situated in the medulla and adjacent cord.

Experience in the use of atropia proved this article to be valuable in many cases, but it has many drawbacks, such as dryness of the throat, derangement of vision, and other constitutional disturbances, some of which may, however, be relieved by jaborandi. Dr. Da Costa has found in ergotine an agent which possesses some of the certainty and permanence of action of atropia, without its drawbacks. His first observations were made some years ago with the fluid extract of ergot; but he has abandoned this for ergotine as better and more easily administered. The power of ergot in contracting the arterioles and checking excessive discharges suggested its use in these sweats. The dose of ergotine is usually two grains three or four times a day, and by the second night its influence begins to be manifested. The remedy may then be continued, and gradually abandoned; it produces no annoyance whatever, and its good effects continue after it has been withdrawn. It will fail or lose its effect, as every other remedy will fail or lose its effect, in the treatment of such an unrelenting disease; but the proportion of failures is small, compared with that of the successes.

As compared with atropia, the immediate results of ergotine are far inferior; but, where speedy and decisive action is not demanded, where it is necessary to keep up a remedy for some time, and where to do so with atropia becomes very difficult, or occasions discomfort and distress, ergotine is an agent to which we may turn with confidence.

UNNA ON THE THERAPEUTIC APPLICATIONS OF PREPARATIONS OF SALVE AND PLASTER MUSLIN.

One of the greatest practical benefits which we owe to Hebra in the treatment of skin-diseases, was his suggestion that ointments, instead of being merely smeared on the affected part, should be spread thickly on linen and kept closely applied by bandages. Unna, in a paper on the subject (*Berliner Klin. Woch.*, July 4 and 11, 1881, and *Edin. Med. Journ.*), carries this a step further. He gives a series of formulæ for ointments, which are spread by the chemist on muslin, and pieces or strips of this salve muslin are cut off and applied at once. The bases of all the salves are hog's lard and beef-suet, singly or combined, and with one-tenth part of benzoic acid added to prevent their turning rancid. When the substance to be combined with these is a powder, it is first mixed with a little almond oil to dissolve it, and when a liquid, paraffin is added to render the ointment harder. To preserve an uniform firmness, two formulæ are given for each, one for winter, the other for summer. Sometimes a more adhesive material than a mere salve is better, and these he names plaster-muslins; to these a little resin or other sticky substance is added. He claims simplicity and elegance for these. The prescriptions for some of them are as follows. The number first given is for cold, the second for warm weather salves.

1. *Lead Plaster-Salve Muslin.*—Emplast. plumbi simplicis, 10—10; sevi benzoinati, 10—10; adipis benzoinati, 2—0. 2. *Boric Lead Plaster Salve-Muslin.*—Emplast. plumbi simplicis, 8—9; sevi benzoinati, 8—8; acidi boracici, 2—2; olei amygdalæ dulcis, 2—1. 3. *Chloral-Camphor Salve-Muslin.*—Sevi benzoinati, 90—95; adipis benzoinati, 5—0; chloral-camphor, 5—0. 4. *Iodoform Salve Muslin.*—Sevi benzoinati, 90—95; adipis benzoinati, 15—10; iodoformii. 5—0. 5. *White Precipitate Salve Muslin* (10 per cent.)—Sevi benzoinati, 70—75; adipis benzoinati, 15—10; hydrarg. ammoniati, 10—10; olei amygdal. dulc., 5—5. 6. *Mercurial Salve-Muslin* (40 per cent.)—Hydrarg. depurati, 37; ung. hydrarg. (Ph. G.), 10; sevi benzoinati, 40; adipis benzoinati, 13. 7. *Zinc Salve-Muslin.*—Sevi benzoinati, 70—75; adipis benzoinati, 15—10; zinci oxidi, 10—10; olei amygdal. dulc., 5—5. 8. *Iodide of Lead Plaster-Muslin.*—Empl. adhesiv. (P. Germ.), 85; terebinthinæ venetæ, 5; plumbi iodidi, 5. 9. *Mercurial Plaster-Muslin.*—Hydrarg. vivi, 10; terebinthinæ, 10; emplast. plumbi simplicis, 25; resinæ pini, 5.

When a thicker layer of the application is desirable, two folds of the salve-muslin can be placed on the part. It is well, too, to cover the salve-muslin with a piece of ordinary muslin, which prevents the fatty matter from coming through and soiling the clothes; and the salve-muslin is so dispensed in Hamburg, and can be had there from Mielck, apothecary, Dammthorstrasse. Unna specially mentions the following as suitably treated by the prepared muslins.

1. *Epididymitis Gonorrhoica, treated by Iodide of Lead Plaster-Muslin.*— The treatment of this by Fricke's sticking-plaster has fallen into discredit, because much pain and sometimes severe consequences, as gangrene, have been caused by it. This may be avoided, Unna says, by taking care not to fold the scrotum when putting the strip of plaster, above the enlarged testicle, round the neck of the scrotum. But the pliant muslin-plaster suggested by him is much more efficacious, and can be resorted to as soon as the more acute stage has passed. Only, when the swelling is extremely tender to touch, he allows twenty-four hours' rest in bed, combined with ice-cold lead-lotion, and then applies his plaster-muslin and permits the patient to move about. The earlier absorption is secured by this method, the more certainly will subsequent induration of the epididymis be avoided.

2. *Treatment of Pigment-Spots by Mercurial Salve-Muslin.*—We can remove freckles or liver-spots, when not too deeply embedded in the cutis, by such means as cause an abnormally rapid desquamation of the cuticle. Of the weaker and more slowly acting means, borax holds the chief place, since this salt, when long continued as an application, is least apt to cause eczema; of the stronger and more rapid in action, corrosive sublimate. By means of the salve-muslin, the desired result may be obtained more certainly and quickly than by the weak lotions; if not so rapidly, yet more comfortably, than by the use of corrosive sublimate, whether as lotion or collodion. The fatty material of the skin having been first removed by sponging with eau de Cologne at bedtime, pieces of the white precipitate or mercurial salve-muslin, cut to suit the sizes of the pigment

spots, are closely applied to them, and, if necessary, are fixed by collodion, and washed off in the morning. During the day the spots may be concealed by a bismuth cosmetic:—℞ Bismuthi oxychlorati, kaolini, ana 5.0; vaselini, 20.0. When the maculæ are covered with this, a subsequent washing will not entirely remove it. Under the combined use of these mercurial and bismuth preparations, the pigment-spots disappear very quickly without much redness or desquamation.

3. *Treatment of Eczema Narium by means of Zinc Muslin.*—By this, eczema of the nostrils, a frequent accompaniment of chronic nasal catarrh, can be well treated. A piece of India-rubber tubing, half an inch long, and one-sixth to one-fourth of an inch in diameter, in proportion to the size of the nostril, is cut for each. Each is then enveloped in zinc muslin, sufficient being rolled round the tube to make it fit the nostril; the part which projects beyond the tube is cut into several strips, and these are folded over the margins of the nostrils to retain it in position. If the upper lip be hairless, the eczema found there is to be covered also with a piece of zinc muslin. If a moustache be worn, there is usually eczema with little infiltration, but with some sycosis. In such a case, pencilling with a weak tar and sulphur ointment, 1 per cent., between the hairs, will be found the best treatment. This method obviates the injurious effects of the secretions of the nose on the eczematous surface without interfering with respiration. The strips which fasten in the tubes are, in adults, only necessary at night. During the day the covered India-rubber tube can be retained *in situ* by a little care, and is scarcely noticeable. It is self-evident that one must do all one can to cure the nasal catarrh, not always an easy task. Unna finds, on the one hand, the genuine Hager's pills, on the other, frequent inhalations of tar, aid him most. At night, oleum rusci can be painted thickly over the zinc muslin which covers the upper lip.

WOOD ON THE THERAPEUTIC ACTION OF DIGITALIS ON THE HEART.

Professor H. C. Wood, on introducing this subject to the notice of the Philadelphia Medical Society (*Phil. Med. Times*, July 2), having referred to the current opinions in regard to the action of digitalis upon the nervous apparatus of the heart, alleged it to have a peculiar effect on the heart-muscle. This influence, which has been shown both by experiment and clinical observation, renders digitalis particularly serviceable in the condition of heart-disease in which the increased work required of the heart is greater than the increase of the power—without regard to the particular valve that may be affected. It improves the nutrition of the heart by regulating its contractions and lengthening the diastolic interval, doing away with the rapid imperfect contractions which interfere with the blood-supply of the cardiac muscle. In such cases the nutrition of the heart suffers, because it is necessary to have lateral distention of the aorta in order to fill the arteries in the muscular tissue. A little digitalis steadies the heart, and therefore improves its condition and retards degeneration. In chronic valve-trouble of the heart, digitalis is serviceable, and sometimes must be given in large doses. A half-drachm dose of the tincture apparently saved from impending death two patients with advanced heart-trouble, who afterwards recovered enough to attend to their business. It enables the heart to gather up its strength, and keeps it going until the last. By the surgeon, digitalis is often used improperly. Thus, it is not rarely given in aneurism, where the great danger is from increased lateral pressure, not want of forward pressure. In acute diseases, with failing heart, digitalis may be employed. Such a condition may occur in asthenic or in the advanced stages of sthenic pneumonia. In the early stage of sthenic pneumonia, it is improper to give it. When the lung is consolidated throughout a large extent, the heart is overworked; by-and-by it begins to fail, the pulse getting rapid and feeble; and now digitalis comes into play. It will save life in such a condition, when without it the patient must die. In a case of alcoholic pneumonia, ten minims of the tincture given every two hours, day and night, reduced the pulse from 150 or 160 to 60.

'Two points in conclusion—(1) in regard to the cumulative action, and (2) in regard to the cause of the slow action of digitalis. The remedy acts slowly in producing its full effect, and its effects are very permanent when they do appear. Digitalis acts slowly and cumulatively, not only because of its special influence upon the heart, but because it only comes very slowly into contact with the heart-structure, since it osmoses slowly into and out from the body. The practical point is this: watch the kidneys when giving large doses of digitalis; if water be not passed freely, then cumulative action will be apt to occur. . . . . The longer the digitalis is in acting, the more likely it is to have a lasting effect. After abdominal tapping, the digitalis often shows itself in reducing the heart's action. Either it has been lying in the intestines unabsorbed, or in the cellular tissue; probably all the fluids are saturated with the drug. Digitalis is a very useful remedy in cases of syncope and collapse. Formerly, alcohol alone was used. One of the advances of modern therapeutics has been to teach the danger of giving large doses of alcohol in cases of surgical shock. Belladonna and digitalis are proper remedies, given by hypodermic injection. The pulse begins to fill up in twenty minutes or half an hour. No irritation is produced at the point of puncture. Throw in twenty minims at once, and expect to find the result in half an hour. He did not wish his remarks to be understood as declaring that digitalis was entirely without danger, but he had used it in hundreds of cases, and had seen men apparently dying revive under its effects. It is important to stop it as soon as evidence appears in the pulse that it is beginning to be absorbed. Used in this way, he did not believe that there would ever be any serious cases of poisoning with it.'

After a short discussion, Professor Wood said that he would touch upon two or three practical points that had been raised. First, as to the choice of preparation: the infusion seemed to be generally preferred; but probably the only reason for this being considered more efficacious was that it was given in relatively larger doses than the tincture. He believed that either preparation obtained from an unknown druggist is not infrequently unreliable. He believed that gastric disturbance (of which, however, he has seen very few cases) is less likely to occur with the tincture than with the infusion. He had not made much use of digitalin, which in fact is not the alkaloid, but merely a purified extract: it is uncertain in its composition and in its results; and as the dose of digitalis is so small, there is no need for resorting to so uncertain a substance. Dr. Wood

wished to be distinctly understood as discountenancing the employment of large doses until the smaller had failed. In conclusion, he made a few remarks on the experimental investigation of the subject.

'The action of digitalis on the frog's heart is that it is rarely arrested in diastole, more frequently in systole. As regards the question of its effect upon the pneumogastric nerve, in some cases the effect is to destroy life in this manner. In such cases, we can restore the action of the heart by cutting the pneumogastric nerve. As a rule, however, the effect is greater upon the heart than it is upon the nerve, and the animal dies of cardiac spasm. It has the same effect upon the pulse of mammals; its full effect produces a weak pulse, sometimes dicrotic. This he had seen beautifully illustrated in man. It means that there are two antagonistic effects upon the heart—upon the heart-muscle, and on the brake action. This is undoubtedly the explanation of the dicrotic pulse and of the double wave written upon the manometer. Later, the arterial pressure is found to be falling. Looking at the heart, the dilatation becomes less, the diastole becomes imperfect, only a small amount of blood now enters its cavities, on account of the cramp of the muscular tissue, just as in the tetanic spasm of the muscles in strychnia-poisoning; and then come cramp of the muscles of respiration and death. The pulse becomes frequent in digitalis-poisoning, because the heart is so constricted that the blood is dammed back and cannot get into the aorta.'

GARDINER ON FORMULÆ FOR DISGUISING DISAGREEABLE FLAVOURS.

[*Continued from p.* 408.]

22. *Compound Elixir of Corydalis.*—Fluid extract of corydalis, fluid extract of stillingia, fluid extract of prickly ash bark, 8 fl. oz. 256 min. each; iodide of potassium, 1 oz. 32 grs.; glycerine, 3 fl. oz.; compound elixir of orange, q. s. Make 8 pints.

23. *Elixir of Gentian and Chloride of Iron.*—Citrosodic solution of chloride of iron, 5 fl. oz. 160 min.; fluid extract of gentian, 8 fl. oz., 256 min.; oil of orange, 16 min.; oil of cassia, oil of anise, oil of coriander, 8 min. each; oil of nutmeg, 4 min.; extract vanilla, 2 fl. oz.; tincture of orange-peel, 2 fl. oz.; alcohol, 22 fl. oz.; syrup, 24 fl. oz.; glycerine, 4 fl. oz.; water, q. s. Make 8 pints.

24. *Elixir of Guarana.*—Fluid extract of guarana, 21 fl. oz., 160 min.; carbonate of magnesia, 3 dr.; curaçoa flavour, 16 fl. oz.; tincture of orange-peel, 7 fl. oz.; tincture of lemon-peel, 1 fl. oz.; extract of vanilla, 2 fl. oz.; alcohol, 7 fl. oz.; syrup, 32 fl. oz.; glycerine, 10 fl. oz.; water, q. s. Make 8 pints and filter.

25. *Elixir of Hops.*—Fluid extract of hops, 21 fl. oz. 160 min.; tincture of orange, curaçoa flavour, 6 fl. oz. each; syrup, 32 fl. oz.; alcohol, 24 fl. oz.; phosphate of lime, q. s.; glycerine, 8 fl. oz.; water, q. s. Make 8 pints.

26. *Laxative Elixir.*—Fluid extract of rhubarb, 4 fl. oz.; fluid extract of senna, deodorised, 2 fl. oz. 320 min.; fluid extract of dandelion, 4 fl. oz.; fluid extract of buckthorn-bark, 2 fl. oz.; fluid extract of ginger, 2 fl. dr.; glycerine, 1 pint; phosphate of soda, 5 oz. 160 grs.; Rochelle salts, 4 oz.; bicarbonate of soda, 2 oz. 160 grs.; tincture of lemon-peel, 3½ fl. oz.; syrup, 28½ fl. oz.; alcohol, 19 fl. oz.; tincture of orange-peel, 3½ fl. oz.; water, q. s. Make 8 pints.

27. *Compound Elixir of Orange.*—Tincture of orange peel, 5 fl. oz.; curaçoa flavour, 5 fl. oz.; orange flower-water, 3 fl. oz.; syrup, one pint, 10 fl. oz.; alcohol, 1 pint, 10 fl. oz.; phosphate of lime, q. s.; water, q. s. Make 8 pints.

28. *Elixir of Pepsine (or Wine of Pepsine).*—Solution of saccharated pepsine, 29 oz. 123 min.; hydrochloric acid, C. P., 30 min.; glycerine, 5½ fl. oz.; tincture of orange, 3fl. oz.; phosphate of lime, q. s.; orange flower-water, 3 fl. oz.; syrup, 20 fl. oz.; alcohol, 17 fl. oz.; sherry wine, q. s. Make 8 pints.

29. *Elixir of Pepsine and Bismuth.*—*a*, Boudault's pepsine, 5 oz. 160 grs.; water, 1 pint; alcohol, 3 fl. oz. mix, filter; *b*, tincture of orange peel, 5½ fl. oz.; tincture of lemon, 2½ fl. oz.; phosphate of lime, q. s.; water, 15 fl. oz., mix and filter; *c*, ammon. citrate of bismuth, 2 oz. 64 grs.; aq., 4 fl. oz., dissolve; alcohol, 8 fl. oz.; syrup, 24 fl. oz.; water, q. s. Make 8 pints. Add *b* to *a*, then *c*, and finally the other ingredients.

30. *Elixir of Pepsine, Bismuth, and Calisaya.*—Sulphate of quinia, 130 grs.; sulphate of cinchonia, 65 grs.; alcohol, 1 fl. oz.; boiling water, 1 fl. oz.; citric acid, 10 grs.; solution of citrate of ammonia, 1 fl. oz.; elixir pepsin and bismuth, q. s. Make 8 pints.

31. *Elixir of Pepsine, Bismuth, and Strychnia.*—Citrate of strychnia, $8\frac{5}{15}$ grs.; alcohol, water, ½ fl. oz. each; elixir of pepsine and bismuth, q. s. Make 8 pints.

32. *Elixir of Pepsine, Bismuth, Strychnia, and Iron.*—Pyrophosphate of iron, 2 oz. 64 grs.; boiling water, 4 fl. oz.; dissolve and add: elixir of pepsine, bismuth, and strychnia, 8 pints.

33. *Elixir of Phosphate of Iron, Quinia, and Strychnia.*—Ferric phosphate (citro-ammon.), 2 ozs., 64 grs.; sulphate of quinia, 1 oz. 32 grs.; citrate of strychnia, $8\frac{5}{15}$ grs.; tincture of orange-peel, 1½ fl. oz.; extract of vanilla, 1½ fl. oz.; citric acid, 20 grs.; phosphate of lime, q. s.; oil of orange, 15 min.; oil of cassia, oil of anise, oil of coriander, 8 min. each; oil of nutmeg, 4 min.; syrup, 38 fl. oz.; glycerine, 12 fl. oz.; alcohol, 28 fl. oz.; water, q. s. Make 8 pints.

34. *Elixir of Pyrophosphate of Iron, Quinia, and Strychnia.*—Substitute the same quantity of pyrophosphate of iron for the ferric phosphate, and proceed as for elixir of phosphate of iron, quinia, and strychnia.

35. *Elixir of Pyrophosphate of Iron.*—Pyrophosphate of iron, 2 oz. 64 grs.; boiling water, 6 fl. oz.; tincture of orange-peel, 3½ fl. oz.; orange flower-water, 3½ fl. oz.; syrup, 24 fl. oz.; alcohol, 26 fl. oz.; phosphate of lime, q. s.; water, q. s. Make 8 pints.

36. *Elixir of Rhubarb and Magnesia.*—Fluid extract of rhubarb, 12 fl. oz. 384 min.; fluid extract of liquorice, 2 fl. oz.; oil of spearmint, 25 min.; oil of cassia, 5 min.; tincture of orange-peel, 1½ fl. oz.; phosphate of lime, q. s.; carbonate of magnesia, 8 oz. 356 grs.; acetic acid, 37 fl. oz.; water, q. s. Make 8 pints. Convert the carbonate of magnesia into acetate with the acetic acid and sufficient water, and combine with the other ingredients.

37. *Compound Elixir of Taraxacum.*—Fluid extract of dandelion, 3 fl. oz., 96 min.; fluid extract of wild cherry, 6 fl. oz., 192 min.; fluid extract of liquorice, 384 min.; fluid extract of gentian, 384 min.; oil of orange, 12 min.; oil of cassia, oil of anise, oil of coriander, 6 min. each; oil of nutmeg, oil of rose, 3 min. each; tincture of cardamoin, 10 fl. dr.; phosphate of lime, q. s.; alcohol, 24 fl. oz.; syrup, 31 fl. oz.; water, q. s. Make 8 pints.

38. *Elixir of Valerianate of Ammonia.*—Valeria-

nate of ammonia, 4 oz. 128 grs.; tincture of orange-peel, 8 fl. oz.; curaçoa flavour, 4 fl. oz.; phosphate of lime, q. s.; orange flower-water, 4 fl. oz.; syrup, 36 fl. oz.; alcohol, 21 fl. oz.; water, q. s. Make 8 pints. Add sufficient aqua ammoniæ to exactly neutralise.

39. *Elixir of Valerianate of Ammonia and Quinia.*—Sulphate of quinia, 2 oz. 64 grs.; alcohol, 8 fl. oz.; citric acid, 75 grs.; boiling water, 3 fl. oz.; dissolve and add to: valerianate of ammonia, 176 grs.; elixir of valerianate of ammonia, 8 pints. Add sufficient aqua ammoniæ to exactly neutralise.

40. *Wine of Beef.*—Extract of beef, 4½ oz.; boiling water, enough to dissolve the beef, and filter; curaçoa flavour, tincture of orange-peel, 4 fl. oz. each; syrup, 1 pint 10 oz.; alcohol, 21 fl. oz.; sherry wine, q. s. Make 8 pints.

41. *Wine of Beef and Iron.*—Extract of beef, 4½ oz.; pyrophosphate of iron, 2 oz. 64 grs.; boiling water enough to dissolve: curaçoa flavour, 4 fl. oz.; tincture of orange-peel, 4 fl. oz.; syrup, 1 pint 10 oz.; alcohol, 21 fl. oz.; solution of citrate ammonia, 4 fl. oz.; sherry wine q. s. Make 8 pints.

42. *Wine of Beef, Iron, and Calisaya.*—Sulphate of quinia, 130 grs.; sulphate of cinchonia, 65 grs.; citric acid, 20 grs.; alcohol, 2 fl. oz.; boiling water, 2 fl. oz. Dissolve, and add sufficient wine of beef and iron to make 8 pints.

43. *Wine of Calisaya.*—Tincture of orange-peel, 2 fl. oz.; oil of orange, 15 min.; oil of cassia, oil of anise, oil of coriander, 8 min. each; oil of nutmeg, oil of rose, 4 min. each; extract of vanilla, 2 fl. oz.; syrup, 3 pints 2 oz.; citric acid, 20 grs.; sulphate of quinia, 130 grs.; sulphate of cinchonia, 65 grs.; phosphate of lime, q. s.; alcohol, 14 fl. oz.; sherry wine, 3 pints; water, q. s. ft. Make 8 pints.

44. *Bitter Wine of Iron.*—Citrate of iron and quinia (soluble), 2 oz. 64 grs.; curaçoa flavour, 8 fl. oz.; tincture of orange-peel, 8 fl. oz.; phosphate of lime, q. s.; syrup, 16 fl. oz.; alcohol, 8 fl. oz.; sherry wine, 4 pints; water, q. s. Make 8 pints.

45. *Sweet Wine of Iron.*—Ammonio-citrate of iron, 2 oz. 64 grs.; water, enough for solution; tincture of orange-peel, 8 fl. oz.; curaçoa flavour, 8 fl. oz.; syrup, 24 fl. oz.; alcohol, 8 fl. oz.; sherry wine, q. s. Make 8 pints.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. Tibbits, E. T.—The Modern Theory of the Action of Digitalis. (*Lancet*, Oct. 1881, p. 586.)
2. Wolfenden.—Agaric in Night-Sweating. (*Med. Times and Gaz.*, Oct. 1881, p. 442.)
3. Jennings, C. E.—Curare in Hydrophobia. (*Lancet*, Oct. 1881, p. 624.)
4. Smith, R. Shingleton.—Codeia in Diabetes. (*Brit. Med. Jour.*) Sept. 1881, p. 474.)
5. Gowers.—Psoriasis arising from Borax. (*Lancet*, Sept. 1881, p. 546.)
6. Dale, J. M.—Heat in Treating Sunstroke. (*Lancet*, August 1881, p. 246.)
7. Harris.—The Benzoates in Dysentery. (*India Med. Gaz.*, August 1.)
8. Clevenger.—Oleate of Mercury. (*Druggist*, August 1881.)
9. Macdonald.—Carbolic Acid in Whooping-cough. (*Edin. Med. Jour.*, 1881, p. 1094.)
10. Beresford.—Tincture of Magnolia Acuminata in Gastric Intermittent Fever. (*Southern Pract.*, May.)
11. Douglass and Squibb.—On Quebracho. (*New York Med. Gaz.*, August 6.)
12. Loamis.—The Treatment of Pneumonia during the First Stage. (*New York Med. Record.*)
13. Govaerts.—The Black Elder. (*Druggist*, August 1881.)
14. Ponte.—Hypodermic Injections of Cold Water. (*Gaceta Medica de Venezuela.*)
15. De Ury.—Borate of Chinoidine as a Febrifuge. (*Gax. Med. di Roma.*)
16. Prota-Giurleo.—Ditana Digitifolia as a Galactagogue. (*Il Farm. Ital.*, 1881.)
17. Tenedat.—Phosphate of Bismuth. (*Bull. Génér. de Thérap.*, 1881.)
18. Heubner.—Modern Remedies for Pertussis. (*Wiener Med. Woch.*, No. 32, 1881.)
19. Riehl.—The Use of Iodoform in Lupus Vulgaris. (*Ibid.*, No. 19, 1881.)

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1. *Tibbits on the Modern Theory of the Action of Digitalis.*—Dr. Edward T. Tibbits, in the *Lancet*, Oct. 1881, p. 586, writes to prove that, in spite of numerous modern authors, the action of digitalis as a depressant, or sedative (if the latter term be preferred), antiquated though it be, is the only one which can be decidedly maintained. The paper is suggestive, and worthy of careful study.

2. *Wolfenden on Agaricus in Night-Sweating.*—Mr. R. N. Wolfenden, in the *Med. Times and Gaz.*, Oct. 1881, p. 442, draws attention to the value of agaricus, given in scruple or half-drachm doses at bed time. An experience of forty cases has proved its powers to be unfailing, and, as there is no danger from an overdose, it is a much more valuable agent than atropia, its curative powers being equal to that drug.

3. *Jennings on Curare in Hydrophobia.*—Mr. C. E. Jennings publishes in the *Lancet*, Oct. 1881, p. 264, a case which occurred in the London Hospital under the care of Dr. Langdon Down, in which curare was the only agent that gave any comfort to the patient. Three or four injections, each of a tenth of a grain, were given every twenty minutes with marked benefit; then two injections of a quarter of a grain of morphia were substituted, unknown to the patient, the effect being such as to make the man decline any more injections. With persuasion, however, a fifth of a grain of curare was now given, the result being again good, so much so, that he would from time to time hold out his leg for the curare to be inserted. The patient died sixteen hours after admission. [Curare has been extensively employed in the treatment of hydrophobia, and other cases of cure are reported, besides the one by Dr. Offenburg, to which Mr. Jennings refers. In the *Med. Times and Gaz.*, Dec. 1877, Dr. Collins relates two other cases which recovered. Dr. Hanlen, *Lancet*, July 1878, p. 104, reports another case of cure from the same drug. Mr. Jennings remarks that cases of hydrophobia have proved uniformly fatal. In sections 525 and 526 of the *Medical Digest*, several remedies are accredited with cures; and, in a paper in the *Lancet*, by Mr. Moore, Dec. 1879, p. 865, detailing a case of cure by morphia hypodermically, and other remedies, it is stated that out of 150 collected cases, 22 recovered, about 10 of which there could be no doubt as to their genuine character. The reporter would wish to see morphia injected hypodermically over the supra-laryngeal nerve, as described in this number of the Record, to counteract the throat spasms.—*Rep.*]

4. *Smith on Codeia in Diabetes.*—Dr. R. Shingleton Smith (*Brit. Med. Jour.*, Sept. 1881, p. 474) brought before the members of the British Medical

Association the value claimed for codeia in the treatment of diabetes. Dr. Smith considers that alkalies and all other treatments, even dieting, are inferior to codeia, which may, in this disease, be considered almost as a specific, and should be the first remedy tried, being given in fairly large doses, until some physiological effect is produced. Some of those who joined in the discussion stated that they had given as much as ten to fifteen grains, thrice a day, with benefit, and others, that even one grain a day had caused unpleasant symptoms. In regard to its action, it was suggested that its power was exerted on the medulla oblongata, whence the original mischief, that produces diabetes, is believed to spring. This speculation is favoured by the fact that codeia is valuable in cough. Dr. Lauder Brunton advises the drug to be given in doses of a quarter to half a grain three times a day.

5. *Gowers on Psoriasis arising from Borax.*—In the *Lancet*, Sept. 1881, p. 546, Dr. W. R. Gowers relates a case of a man who had taken, for the cure of epilepsy, borax for nearly two years. Psoriasis followed, but was quickly cured by adding five minims of arsenical solution to each dose. Two other cases are referred to, in which a similar result occurred during the use of the drug.

6. *Dale on Heat in Treating Sunstroke.*—Dr. J. M. Dale, in the *Lancet*, August 1881, p. 246, refers to a method of treatment in cases of sunstroke, popular in some districts, viz., applying heat by means of hot bricks, wrapped in flannel, to the body, with hot flannels applied to the head, and suggests that this treatment should be more carefully studied, seeing that it was a common thing for our forefathers to wrap many patients, *in extremis*, in the skins of recently slain animals. [In an article in the *Med. Times and Gaz.*, Sept. 1876, p. 368, Professor Wood of Philadelphia states that, in all the cases of collapse from sunstroke that had come under his observation, immediate relief had followed the use of the hot bath, combined with moderate doses of whiskey and ammonia. Mr. D. H. Cullimore has published a very instructive notice on the hot-bath treatment of one variety of sunstroke met with in acclimatised district civilians—engineers, police, and medical officers—men whose duties necessarily expose them to great and prolonged exposure to heat, considerable fatigue, and a good deal of discomfort while sojourning in tents or in travellers' bungalows. They are probably tainted with malaria, and may have occasionally suffered from attacks of congestion of the liver and dysentery. While on a tour of this kind, the patient-elect begins to feel irritable, tired, and out of sorts; he tries to look bright and pull himself together. After a day or two, the heat of skin increases, and he ceases to perspire; there are headache and intolerance of light; and, when considerably done up, he returns home, and, after a sleepless night, he sends for the doctor. His face is now flushed, and there is intolerance both of light and of sound; perhaps delirious and muscular twitches; the skin is dry and burning; the temperature 106 deg. to 107 deg., with exacerbations if complicated with fever. In such cases the warm bath gives most marked relief, combined with aconite and cold applications to the head.—*Rep.*]

RICHARD NEALE, M.D.

7. *Harris on the Benzoates in Dysentery.*—Mr. Geo. Harris, officiating civil surgeon, of Burrisaul, br ngs to the notice of the editor of the *India Med. Gaz.*, Aug. 1st, 1881, and that of the profession generally in India, the great value in the treatment of dysentery, both the acute and subacute varieties, of the benzoates of ammonia and soda, in doses of 10 to 20 grains, twice, three times, or more frequently, daily. He generally uses 15 grains three or four times daily, and prefers the salt of ammonia. He finds that it rapidly causes an active secretion of bile from the liver and cessation of the acute symptoms. He has used it a good deal in the gaol and in private practice, and has had very good reason to be satisfied with the results. The experiments being at present only tentative, the exact dose and time of administration cannot be exactly fixed. Further experiment and practice will decide if larger doses may be better. In most cases patients tolerate the drug readily, and under its use the stools rapidly become fæcal. He suggests that the excess of bile poured out into the intestine acts beneficially on the congested or even ulcerated large intestine.

8. *Clevenger on Oleate of Mercury.*—Dr. S. V. Clevenger (*Druggist*, August 1881) comes, after extended experimentation, to the following conclusions respecting this substance. 1. In the course of time, at least, the oleate breaks up into metallic mercury in an extreme state of subdivision. 2. These minute metallic globules are suspended in the oleic acid, and a steady, though slow, shower of the globules falls from the liquid. 3. At all times, different heights of the oil yield different percentages of mercury, the top affording the least, and the bottom the greatest quantity. 4. The freshly prepared oil will be most uniform; an oleate a few months old containing less mercury, which accounts for the variable results obtained by physicians in its use. 5. The term 'oleate of mercury' is most probably a misnomer. 6. The simplest method of making the 'oleate' would be by rapid and prolonged shaking of the metal with the required amount of oleic acid; and old precipitated oleate should be thoroughly reshaken before being dispensed.

9. *MacDonald on Carbolic Acid in Whooping-Cough.*—Dr. MacDonald (*Edinburgh Med. Jour.*, 1881, p. 1094) says that on extended trial he finds carbolic acid, in doses of one-fourth of a minim to a child of six months, one-half minim for a year, and one minim for two years and upwards, to be the best remedy for whooping-cough. The whoop goes; the vomiting ceases; the paroxysms are modified in intensity and frequency. This result Dr. MacDonald believes to arise from an action similar to that of creasote on the motor fibres of the vagus to the stomach, and from a lowering of vitality of the specific germ of whooping-cough disease. This points to the antiseptic treatment of the zymotic diseases generally.

10. *Beresford on Tincture of Magnolia Acuminata in Gastric Intermittent Fever.*—Dr. A. E. Beresford (*Southern Practitioner*, May) recommends tincture of the fresh bark of the root of magnolia acuminata in gastric intermittent. The treatment is commenced with a preparatory dose of podophyllin and leptandrin; and the tincture of magnolia is given in tablespoonful doses every three or four hours until the fever is arrested; and then in wineglassful doses every morning, to prevent recurrence. He believes that the magnolia acts as a sedative, antiperiodic, and tonic.

11. *Douglass and Squibb on Quebracho.*—At a meeting of the New York County Medical Society (*New York Med. Gazette*, August 6), Dr. Douglass exhibited a fluid extract, which had been carefully prepared by Dr. Squibb, and related the history of

the cases in which it had been used. Of these, eleven were cases of spasmodic asthma, in nine of which the dyspnœa was notably relieved. All the cases showed that it was an agent which would modify the violence of respiratory movements, and was therefore useful in dyspnœa from any cause, as it had no unfavourable after-effects. If its active principle could be separated, it could be more efficiently used hypodermically. Dr. Squibb said that he did not consider quebracho a desirable addition to the materia medica; that it showed itself to be only a duplicate of other remedies better known. It was important to know if in the cases relieved other agents had not been also given, and, since it had been shown that the drug caused nausea and vomiting, how far this effect tended to relieve the dyspnœa, irrespectively of the special action of the drug.

12. *Loomis on the Treatment of Pneumonia during the First Stage.*—Prof. Alfred L. Loomis, in *New York Med. Record*, says, in regard to treatment:—What measures shall we employ to overcome or mitigate the impression made upon the nervous system by the morbific agent which is operating to produce the pneumonia? The experience of the past eighteen months leads me to state with some positiveness that in opium we have such an agent. My rule for the past year has been to bring my patient under the full influence of the drug at the onset of a pneumonia, and to hold him in a condition of comparative comfort until the pneumonic infiltration is completed (usually for the first four days of the disease). After this period, the greatest care must be exercised in its use, for now a new danger threatens—namely, paralysis of the bronchi, and consequent accumulation of secretion in the bronchial tubes—which will greatly increase the difficulties of respiration; but during the developing period of the disease, when the pneumonic blow is first struck, morphia, given hypodermically, seems to lessen the nervous shock and to diminish or prevent the effect of the pneumonic poison on the nervous system, until the first violence of the poison has been spent in completing the pulmonary infiltration. The use of opium in this way does not interfere with the usual antipyretic treatment of the disease, nor does a demand for alcoholic stimulants contra-indicate its use. The results which have followed this plan of treatment in the limited number of cases in which I have been able to fairly test it (in patients that have been directly under my personal management) have convinced me that it greatly diminishes the chances of heart-failure; and cases which from their age and attending circumstances seemed hopeless have recovered. The great relief and comfort which the use of opium in this way gives to the pneumonic sufferer during the first four days of his struggles are sufficient to commend it, especially in those cases where an extensive pleuritic inflammation accompanies the pneumonic development.

13. *Govaerts on the Black Elder.*—Govaerts (*Druggist*, August 1881) has recently discussed this almost forgotten drug. Since the origin of the historical epoch, physicians have ascribed to this drug properties which they have utilised in various diseases. The alleged properties have been largely dependent on its laxative or purgative action. These properties are found to exist in a greater extent in the bark than in the leaves; these latter lose about 80 per cent. of their weight by desiccation. Their nauseous and fetid odour disappears, through desiccation, as time advances, to give place to a purely herbaceous odour. In relation to pharmaceutical preparations and posology, Govaerts arrives at the following conclusions. 1. The succus from the leaves is the best form for the administration of the drug, and it can be administered thus: Juice of the leaves of the black elder, two ounces; spirit of peppermint, five drops. 2. The juice of the root produces excellent effects, and may be given in doses of from half an ounce to an ounce, when the preparation is properly made. 3. The wine of the fresh root of the drug (30 parts to 100) is the most agreeable preparation, and is also the most stable. In doses of from half an ounce to an ounce it produces abundant alvine evacuations, accompanied, however, by nausea and vomiting. 4. Accelerated temperature exercises the same action on the leaves and the bark, and on their preparations; it completely destroys their therapeutic qualities.

14. *Ponte on Hypodermic Injection of Cold Water.*—In the *Gaceta Medica* of Venezuela, Dr. Ponte relates his experiences in several instances in which he employed water hypodermically for the relief of pain. The first case was that of a boy who was suffering from an attack of intercostal neuralgia, so severe as almost to endanger the life of the patient by interference with respiration. Not having any morphia with him, the author determined to work upon the imagination of the sufferer by injecting pure cold water over the situation of the pain, a procedure which, much to his astonishment, was followed by permanent relief. Impressed with this fact, Dr. Ponte resolved upon further experiments. The next case was one of toothache. In order to eliminate the imaginative element, he informed the patient of the treatment to be employed, for the execution of which permission was rather reluctantly given. An injection practised upon the side of the face nearest to the pain was followed by considerable burning sensation, but in less than a minute the odontalgia had subsided. Animated with these results, he employed cold-water injections in a variety of different pains, always with happy issue, even in cases where morphia had been the drug previously administered. Another patient had been suffering nine years from intense gastro-intestinal neuralgia, which baffled all remedies. The pain came on after meals, and its violence was such as to cause her frequently to faint. When first seen by the writer, she was utterly prostrated. Two injections relieved the pain, and subsequent tonic treatment restored her to perfect health. Several hundred cases have been treated in the manner described, with good results. [Duhorn, Dumontpallier, and other French physicians, have recorded numerous experiences of a like character. Dumontpallier found, however, that simple acupuncture produced like results, and attributes the relief of pain to peripheral compression and reflex action.—*Rep.*]

15. *Ury on Borate of Chinoidine as a Febrifuge.*—Considering the current opinions in regard to the causes of paludal fevers and the antiseptic properties of boracic acid, Dr. De Ury (*Gaz. Med. di Roma*) thinks that the combination of this acid with the amorphous alkaloid cinchonoidine may prove a valuable acquisition in the treatment of malarial fevers, in the place of the much more expensive sulphate of quinine, the price of the former remedy being less than one-twelfth that of the latter. A gramme of the borate of cinchonoidine is equivalent in its effects to 66 centigrammes of the sulphate of quinine.

16. *Prota-Giurleo on Ditana Digitifolia as a Galac-*

tagogue.—With this plant, a native of Brazil, Prota-Giurleo (*Il Farm. Ital.*, 1881) experimented upon nursing women. It was found that, under its administration, either in the form of an aqueous infusion or an ethereo-alcoholic tincture, milk could be made to flow from the mammæ upon the slightest pressure. The drug has a selective influence over the mammary glands. It promotes, increases, accelerates, and even brings back the secretion of milk. The author has prepared a liqueur named the 'Galattofero', which is readily administered to mothers and nurses. Of this tincture one to three tablespoonfuls are added to half a litre (about 0.8 pint) of water, or, better, to infusion of chamomile, and thus taken in divided doses during the day. The remedy is recommended in cases of mothers and nurses whose milk is scanty, and nurses in maternity hospitals, who are compelled to suckle several children.

17. *Tenedat on Phosphate of Bismuth.*—Tenedat (*Bull. Gén. de Thér.*, 1881), by reason of the extreme variability in composition of the commercial nitrate of bismuth, proposes to substitute the phosphate of bismuth for the subnitrate. The dose of the phosphate is less (1 to 2 grammes), and it may be employed under the same circumstances. To prepare it, phosphate of sodium is dissolved in distilled water, and this is raised to the boiling point in a glass or porcelain vessel; to the boiling solution acid nitrate of bismuth is added, a little at a time; the reaction begins immediately, and after a protracted boiling the phosphate of bismuth is precipitated in the form of a white dense granular powder, which readily separates from the acid liquid. It is washed upon a filter until the filtered fluid exhibits a neutral reaction, and is then dried.

18. *Heubner on Modern Remedies for Pertussis.*—Professor Heubner of Leipzig (*Wiener Med. Woch.*, No. 32, 1881), gives a statistical table of the effects of some modern remedies for whooping-cough. In one column he gives an analysis of the effects of the bromide of potassium, quinine, chloral-hydrate, salicylic acid, and belladonna. The comparative value of potassium bromide is shown by a comparison of twenty-three uncomplicated cases. In not one of these was the duration of the disease shortened, but, on the other hand, in nine of the cases the intensity of the paroxysms as well as their frequency was diminished. In respect to quinine (administered internally in small doses, not exceeding 4½ grains per day), Heubner observed three times, in eleven uncomplicated cases, an abbreviation of the duration of the disease, while the paroxysms also in five cases underwent a favourable resolution. Chloral-hydrate was given internally in two cases, in divided doses; in all the rest by one enema daily, containing a larger quantity. A diminution in duration of the disease was observed only twice in ten cases, while resolution of the individual paroxysms took place six times, and even to a greater degree than under the treatment by quinine. Salicylic acid was given internally but once, being administered at other times by inhalation of a one-half to one-third per cent. solution three times daily, in the dose of thirty grammes, by means of Siegle's apparatus. In the seventeen cases thus treated, the effect upon the length of the disease was very unimportant, since only twice could a positive shortening be credited to it. The alleviation of the paroxysms, on the other hand, was very gratifying; for, in ten of the seventeen cases, the diminution of the severity or of the frequency of the seizures was very striking. At one time the intensity, at another the frequency, was favourably reduced, without any perceptible change in the other factors of the disease. Belladonna was for the most part administered in the form of the powdered extract, and in a few cases in the form of the powdered leaves, the daily dose, being 2.5 and 5 grains; and in eight uncomplicated cases, besides the immediate checking of the paroxysms, the duration of the disease itself was cut short by the remedy, the attacks becoming also milder. It thus appears that, for the alleviation of the paroxysms, the inhalation of salicylic acid and chloral-hydrate promise the most positive results; while, for the abbreviation of the entire disease, the greatest benefit is to be expected from belladonna and quinine. Still these results are to be considered only relative.

19. *Riehl on the Use of Iodoform in Lupus Vulgaris.*—This writer believes (*Wien. Med. Woch.*, No. 19, 1881) that he has discovered in iodoform a remedy for lupus analogous to mercury and iodine in syphilis, that is, that iodoform causes absorption and transformation of the lupous tissue. In the case of ulcerating lupus tubercles, he places on the part a layer of iodoform 1 to 3 millimètres thick: simple pencilling with glycerine of iodoform is of no use. For deeper infiltrations he first, with soap, washes off all fat from the surface, and then pencils the part with a solution of caustic potash (one to two by weight of water) till the epidermis is thoroughly removed, after which he removes the superfluous caustic, dries the part, and places on it a layer of iodoform 1 to 2 millimètres thick. This he covers with cotton-wool and plaster, and leaves for three to eight days; when, in an ordinary case, he expects the lupous tissue to have disappeared, leaving slight pits. There is no pain, except when the caustic is applied, nor is there any suppuration. The process may have to be repeated twice or thrice in severe cases. JAMES ANDERSON, M.D.

MEDICINE.

RECENT PAPERS.

1. KERSCHENSTEINER, KOHNHORN, and BUTRY.—The Etiology of Pneumonia. (*Deutsch. Med. Woch.*, No. 32, 1881.)

2. DAVIDSON.—Nerve-Stretching in Locomotor Ataxy. (*Liverpool Med. Chir. Jour.*, July 1881.)

3. BUCQUOY and HANOT.—The Delirium of Typhoid Fever, especially in Convalescence. (*Arch. Gén. de Méd.*, July 1881.)

4. NIXON.—Functional Murmur in the Pulmonary Artery. (*Dub. Jour. of Med. Sciences.*)

5. SOUTHEY.—Capillary Drainage of Pleuritic Effusions. (*Lancet*, July 1881.)

6. POPE.—Recovery after Twelve to Fifteen Minutes' Immersion. (*Lancet*, October 1881.)

7. SAUNDBY, R.—The Doctrine of Saturnine Gout. (*Lancet*, Sept. 1881, pp. 385, 414.)

8. POLLOCK.—Pulsatile Aorta. (*Med. Times and Gaz.*, Oct. 1881, p. 442.)

9. BRUNTON, T. LAUDER.—On Jaundice. (*Brit. Med. Jour.*, Sept. 1881, p. 477.)

1. *Kerschensteiner, Köhnhorn, and Butry on the Etiology of Pneumonia.*—In the *Deutsch. Med. Woch.*, No. 32, 1881, is an account of three epidemics bearing on the etiology of this disease. That reported by Dr. Kerschensteiner occurred in the Amberg Prison. Of 1,200 prisoners, 161, that is, 13.4 per cent., had pneumonia, and 46, or 28.5 per cent., died.

Cold, or the nature of their occupation, was certainly not the cause of their illness, nor was there anything in the nature of the food or water used, to explain it. Among the authorities and servants there was no case of illness. No single one of the sleeping-rooms was free from sickness, and the number of cases was quite independent of the relative space occupied, or position of the water-closets. Those who had been the shortest time in captivity were most liable to the disease, and it was ascertained that lung-disease was in the way of appearing epidemically in the institution. Dr. Kerschensteiner, therefore, believes himself justified in the conclusion that the cause of the disease is a sort of malaria, or miasma, inherent in the place, and non-transportable. The second epidemic, reported by Dr. Köhnhorn, occurred in the Wesel Barracks. Dr. Köhnhorn, by careful observation, excluded such causes as cold, sudden change of temperature, wind, ozone, subsoil-water, and occupation. The disease seemed endemic in certain barracks, and seemed also closely associated with intermittent fever. The third epidemic, reported by Dr. Butry, occurred in the village of Becherbach during March and April of this year. Of 460 inhabitants, 20 were attacked, of whom 9 died, 8 of these being advanced in years. The disease was of asthenic type, and attacked mostly single families, or near neighbours.

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2. *Davidson on Nerve-Stretching in Locomotor Ataxy.* — Dr. Davidson (*Liverpool Medico-Chir. Jour.*, July 1881) publishes two cases of locomotor ataxy in which the sciatic nerves were stretched. In the first three weeks after the operation he regained co-ordinating power and patellar reflex; he had no subsequent return of the lightning pains or gastric attacks, and could walk a quarter of a mile without a stick. The other case was a very severe one, and the improvement was not so marked, the ataxy and gastric crises were relieved, the lightning-pains became rare and slight, and his general health had improved. ROBERT SAUNDBY, M.D.

3. *Bucquoy and Hanot on the Delirium of Typhoid Fever, especially in Convalescence.*—According to Bucquoy and Hanot (*Arch. Gén. de Méd.*, July, 1881, p. 24) the delirium in typhoid fever may be described clinically as occurring at the outset of the malady, during its course or during convalescence; This delirium of convalescence is apyretic, and consequently analogous to the delirium of mania, whilst that of the outset, of course, is always accompanied by fever. In the course of the disease, delirium may be a continuation of the initial delirium, or it may commence during the full force of the fever. It is then of better augury than when it dates from the outset of the disease. The delirium of convalescence may also be continuous with delirium of the febrile period, or may arise during convalescence. The first appears to be in relation with a profound cerebral change; it borrows its value, therefore, from the condition contemporaneous with its explosion. The second, peculiar to convalescence, is characterised by intellectual disorder rather than by disturbance of the affective faculties. The ideas are inco-ordinal, analogous to the dreams of a patient in a state of somnolence, which is preferable to the delirium of inanition; thus this cause has been invoked to explain delirium at a period when typhoid patients were submitted to rigorous starvation. The pathogeny of this delirium is, however, other than this, and the very variability of its forms is a proof of it; only in this diversity of forms it always preserves a remarkable character—systematisation. Most frequently ambitious delirium is observed, differing from the delirium of general paralytics precisely in the probability of the ideas, and their true sequence, that is to say, in systematisation. Finally, the delirium, like other symptoms, presents various characters in different epidemics. This frequency, or rarity of delirium, is observed in analysing the various epidemics; such, for example, as that in 1853, in the cases observed in the practice of Louis, at the Hôtel-Dieu, and in more recent ones which occurred at the Hôpital Cochin.

4. *Nixon on Functional Murmur in the Pulmonary Artery.*—Among the different kinds of cardiac murmurs, those originating in the pulmonary vessels have by common consent been considered of rare occurrence and secondary importance. Dr. Nixon, however, in the *Dubl. Jour. of the Med. Sciences*, has recorded a series of observations, tending to show that a functional murmur occurs quite frequently in the pulmonary artery. The observations of the author certainly deserve consideration, if only to call the attention of others to his rather novel statement. It would appear that this murmur may occur in many febrile affections. Thus Dr. Nixon has frequently heard it in acute articular rheumatism, in typhoid fever, and in bronchitis. But he has likewise observed it in nervous diseases, and in conditions of general debility. Finally, he states that it may be met with even in certain affections, which, in themselves trivial, nevertheless give rise to impaired nutrition. He believes it to be caused by a diminution of tension in the artery itself. This would permit a twist or constriction to be formed at its root during the ventricular systole. While, therefore, this pulmonary murmur, admitting the comparative frequency of its occurrence, cannot in any sense be regarded as pathognomonic of a special disease, its presence may, nevertheless, serve to draw attention to the existence of a perhaps otherwise unsuspected malnutrition. For this reason, it is well that we should be on the look out for its presence. But the *New York Med. Record* suggests that, before we can class it with symptoms better known and more completely understood, we need corroborative evidence from others as to the frequency of its occurrence and the fact of its symptomatic significance.

5. *Southey on Capillary Drainage of Pleuritic Effusions.*—In the *Lancet*, July 1881, p. 174, Dr. Southey reports two cases in which this mode of treatment was followed by the happiest results. The following remarks conclude the paper. 'Pleurisy with simple serous effusion does not often need operative interference, but the indications in the cases that require tapping are generally precise enough. The temperature remains high, and all the vital powers steadily decline; the appetite is *nil*; the bowels are irregular; the urine diminishes as the pressure upon the lung increases; the oppression of the circulation through the sound lung becomes greater; coughing brings on dangerous dyspnœa, and the patient may die, as they sometimes do, quite suddenly from fatal syncope. Tapping, in some way or other, having become imperative for the patient's safety, the next question is how this can be done with the smallest risk, least pain, and best results. Does aspiration or gradual drainage offer the best results? Is the one method attended with more risks than the other? Experience can alone decide this. Both methods offer little or no risk of the entrance of air. Aspiration, has in several cases in which I have tried it, been attended

by considerable pain; by serious fits of coughing during and towards the end of the operation; and by subsequent reaccumulation of the fluid, whether from fault of the method of proceeding, or of the patient, I cannot decide. Gradual drainage, however, appears to me a preferable mode of drawing off the effusion. It is little painful, easy to effect, and would, I am sure, be often found all-sufficient for complete cure of the case.' [Dr. Southey's original paper, read before the Clinical Society, in which he first brought the subject of capillary drainage in pleuritic effusions, before the notice of the profession, is to be found in the *Lancet*, February 1879, p. 159.—*Rep.*]

6. *Pope on a Case of Recovery after Twelve to Fifteen Minutes' Immersion.*—Mr. Charles Pope, in the *Lancet*, Oct. 1881, reports a case of a man who was entirely under water during the period mentioned. His head and chest being tightly jammed against a wall, prevented water from entering the lungs. [Well authenticated cases may be referred to, *vide Med. Digest*, Section 1620, of recovery after immersion of half an hour, an hour and a half, and two hours respectively.—*Rep.*]

7. *Saundby on the Doctrine of Saturnine Gout.*—In the *Med. Times and Gaz.*, Sept. 1881, pp. 385, 414, Dr. Robert Saundby brings forward twelve cases of lead-poisoning, associated with gout, that have been published by Drs. Garrod, Wilks, Begbie, and Murchison, to establish the relationship existing between the diseases. These twelve cases, with another one observed by Dr. Saundby himself, do not, when carefully examined, warrant, in Dr. Saundby's opinion, the acceptance of the usually received doctrine of saturnine gout.

8. *Pollock on Pulsatile Aorta.*—This case, under Dr. Pollock (*Med. Times and Gaz.*, Oct. 1881, p. 442), was that of a woman, aged 53, who had for five or six months experienced a 'curious throbbing sensation' in the abdomen, for many years past having suffered from dyspepsia, with pain and sickness after food. The sensation was most felt in the lumbar and inguinal regions on the right side. She was much relieved by lying down. Immediately over the aorta, in the middle line of the abdomen, a well-marked pulsation, synchronous with the heart's beat, was felt. It was not expansile like an aneurism. A hard prominence was felt coming forwards from the spine, distinctly behind the pulsation. The patient died three days after admission. The aorta was found healthy, but pushed forward and to the left by a new growth involving the bodies of all the lumbar vertebræ. [Epigastric and abdominal pulsations are not unfrequent, and are often very obscure as to their origin and as to the treatment needed. Dr. Murchison, in his Croonian lectures (*Lancet*, April 1874, p. 578), pointed out their frequent connection with functional derangements of the liver. A most valuable paper by Dr. Balfour, on aortic pulsations, was published in the *Edinburgh Med. Jour.*, Jan. 1876, p. 616. Bromide of potassium proved an efficient remedy when the cause was simply neurotic. In the *Med. Times*, Feb. 1845, Dr. Nottingham gives an able exposition of the semeiotic value of abdominal pulsations. Vide Ranking's *Abstract*, Vol. i, 1845, pp. 44, 207; Vol. ii, 1847, p. 53.—*Rep.*]

9. *Brunton on Jaundice.*—Dr. Lauder Brunton (*Brit. Med. Jour.*, Sept. 1881, p. 477) opened, before the British Medical Association, at its annual meeting this year, a discussion upon jaundice, in which he insisted upon three points. 1. Whether there were any hæmatogenous jaundice, or whether it was always hepatogenous. 2. The power of the liver to regulate its flow of blood, and thus to alter the flow of blood through all, or nearly all, the abdominal viscera. 3. The *modus operandi* of one or two remedies. Hepatogenous jaundice was first considered as being due either to increased pressure in the bile-capillaries, or to obstruction of the bile-ducts, or to lessened pressure of blood in the capillaries of the liver. Absorption of bile took place under such circumstances, with a rapidity of which few had any idea. Heidenhain found that, if a cannula were placed in the gall-bladder of a guinea-pig, and he tied the gall-duct, and then allowed the bile to flow freely away, secretion took place very rapidly. If, however, he increased the pressure to a very slight extent, the flow was arrested, and the moment would come when the secreted and reabsorbed bile would entirely balance one another; and that point was only equal to about eight inches of water—a very low pressure; if he increased the pressure, the water was absorbed almost as fast as he could pour it into the tube, and, if the water were coloured with indigo, the animal quickly became perfectly blue all over, life going on unimpaired. This was a case of lessened blood-pressure, and the question was, where did this lessening take place? in the portal vein, in the hepatic vein, or in the capillaries? This brought one to the question of the portal function of the liver; the liver had the power of regulating the flow of blood, not merely through itself, but through the rest of the abdominal viscera, as the stomach and intestines. An immense amount of blood flowed to the intestines. The blood rushed through the liver with a velocity almost incredible to one who had not seen it. A cannula was fixed in the portal vein of a fresh liver, and connected with a bottle full of blood. By raising the bottle, the pressure was increased at pleasure, and the blood rushed out of another cannula fixed in the hepatic vein, almost as rapidly as it would have done out of the bottle itself, had the cork been removed. In a short time the flow became less and less, until it nearly ceased, which showed, Dr. Brunton thought, that the liver had a power of regulating, to a great extent, the quantity of blood that passed through it. The liver has not only the power of thus regulating the flow of blood through itself, but also through other abdominal viscera. Once, when suffering from ague, just as the attack came on, Dr. Brunton had intense rectal pain, with hæmorrhoidal swellings. Quinine lessened both, and a warm bottle over the liver relieved the pain—facts that seemed to tell Dr. Brunton that the resistance was in the liver. The question of hæmatogenous jaundice, or whether it was possible for bile to be formed in the blood itself, was still left undecided; but the balance of evidence pointed to the fact that bile was only formed in the liver and thence absorbed into the blood. As to drugs, Carlsbad waters were very valuable, and the plan of sipping the waters, when invalids visited the Spas themselves, greatly influenced their action, as the act of swallowing probably removed the influence of the vagus upon the liver, thus allowing, to a certain extent, the removal of the jaundice. In catarrh of the gall-duct, ipecacuanha was found to be an efficient remedy. [Dr. Corrigan (*Med. Digest*, Sects. 975-3) asserted, in 1845, that ipecacuanha, in cases of jaundice due to grief and mental emotion, was the only and almost certain remedy for this usually most fatal form of jaundice. Dr. Cook, in the *Practitioner*, Aug. 1880, p. 107, reports several cases, not due to

mental emotion, in which ipecacuanha effected a rapid cure. Vide LONDON MEDICAL RECORD, Nov. 1880, p. 445.—*Rep.*] RICHARD NEALE, M.D.

SURGERY.

RECENT PAPERS.

1. FISHER.—Genu Valgum treated by Manipulation. (*Lancet*, Sept., p. 503.)

2. GAY, JOHN.—Hæmorrhoids or Piles. (*Lancet*, July-Sept. 1881, pp. 169, 367, 496, 538.)

3. WILLIAMS, W. R.—A Remarkable Case of Recto-Vaginal Fistula and Fæcal Calculus. (*Lancet*, Oct. 1881, p. 588.)

4. STOCKER, J. R.—Dugas' Pathognomonic Sign of Dislocation of the Humerus. (*Lancet*, Oct., p. 608.)

5. WALKER, W.—Complete Severance of the Jejunum. (*Lancet*, Oct., p. 627.)

6. JUDSON, A. B.—Rupture of the Plantaris Muscle. (*New York Med. Journ.*, July 1881.)

7. ROLL. — Defer's Treatment of Simple Hydrocele. (*Bull. Gèner. de Thérap.*, August 30.)

8. PLETZER.—Intermittent Dropsy of the Knee. (*Deut. Med. Woch.*, No. 37.)

9. JERSEY.—Rupture of the Internal Lateral Ligament of the Knee-joint. (*New York Med. Jour.*, June 1881.)

10. GIBNEY.—Caries of the Ankle in Children. (*New York Med. Herald.*)

11. WEBB, HOLDEN.—On the Treatment of Spinal Curvature and Abscess by Inflation. (Reprint from *Australian Med. Jour.*, 1880.)

12. PEREZ, ORTEZ.—On the Radical Cure of Hernia by the Subcutaneous Injection of Alcohol. (*Gaz. des Hôp. Militaires.*)

1. *Fisher on Genu Valgum treated by Manipulation.*—In the *Lancet*, September 1881, p. 503, a case, under the care of Mr. Fisher, is reported, with accompanying plates, showing the condition of the patient before and subsequently to treatment, in which a marked case of genu valgum was perfectly cured, in a lad, aged 16, by the following mode. The limbs were put up in trough splints on December 11th, 1880, and the joints were daily manipulated. This manipulation consisted in fixing the femur, by holding the inner condyle with one hand, the leg being grasped round the malleoli with the other hand, extended, and then firmly pressed inwards. By these means the contraction of the external lateral ligament, the biceps tendon, and the fasciæ, were quickly overcome, and on January 26th (forty-six days from the commencement of the treatment) the ankles could be brought together. On March 16th, the boy could stand erect, with the legs extended in their normal relationship to the thighs. The joints were somewhat loose, owing to the internal lateral ligaments not having yet contracted; steel supports were therefore ordered, and the patient left the hospital. In this case, before treatment was begun, the patellæ were completely dislocated laterally, when the joints were flexed; this was probably due to adapted shortening of the great extensors of the legs, the points of origin and insertion of these muscles being unduly approximated on account of the extreme degree of deformity which was present. Another point deserving notice was, that in both legs, the plane of the articular surface of the femur was unchanged, the elongation of the internal condyle, a condition lately much insisted upon as being the chief difficulty to be overcome in cases of severe genu valgum, not existing. Mr. Fisher, in the *Lancet*, January 1877, p. 84, gave a detailed description of this plan of treatment, which will in most cases avoid the necessity of any operative interference.

2. *Gay on Hæmorrhoids or Piles.*—Mr. John Gay, in the *Lancet*, July, Aug., and Sept. 1881, pp. 169, 367, 496, 538, enters very fully into the anatomy, physiology and treatment of piles. Mr. Gay states that 'hæmorrhoidal dilatations, or piles, are not found to co-exist with like disturbances in any of the neighbouring or even associated organic venous plexuses. I have never seen a case in which varicocele could be said to have been an etiological co-ordinate of piles, to whatever cause the latter may be traced, nor have I found any satisfactory evidence of the existence, with the worst forms of piles, of allied over-repletion of other vein-systems. I have seen the hæmorrhoidal and the vaginal veins very largely distended at the same time, through the pressure of large pelvic tumours or gravid uterus; but this result does not contravene the principles for which I am contending, that hæmorrhoidal veins may be, and usually are, exclusively dilated or varicose.' Descriptive plates of the various forms of piles, as observed after injection and careful dissection, are given at pp. 169 and 367. Mr. Gay submits the following general proposition as the result of many years' careful study. 'As in the limbs so in the rectum, and, indeed, throughout the whole body, the vein-system is, as I have often said, dual, consisting of a deep axial, or, in relation to structures, a muscular set or system of veins, and another a collateral or compensatory system, which, in relation to structure, is dermoid or mucous. Veins of the first order contribute the channels which convey the main streams, whilst those of the latter convey the rills that feed them. The first are liable to very little variation in their respective courses, whilst the latter afford every variety in this respect, and have almost unlimited means of accommodation to contingencies, either by dilatation of their coats, of a thousandfold and more multiplication of their vessels if needed.' Mr. Gay compares the upper hæmorrhoidal veins and their allies, the uterine, vesicle, and prostatic, to the crural; the lower hæmorrhoidal and the vaginal to the saphenous, the one series being in direct communication with the common iliac, an axial or muscular vein, the latter diverging into the portal through the mesenteric, and through these and the hepatic veins into the cava. Another set of veins is thus brought into prominence, to which no other import is attached than that they belong to the compensatory or dermal, as homologous to the saphenous and the subcutaneous or mucous system generally. Mr. Gay thinks it is tolerably clear that the hepatic and portal veins form a portion of the compensatory series to the cavæ, and, therefore, are functionally allied to the superficial veins, typified by the saphenous. The bearing of these remarks upon piles is to prove that there are no anatomical grounds on which hepatic disease, or, indeed, disease of any organ, interposed between the rectum and the heart, may be said to be specially favourable to the production of rectal hæmorrhoids. Mr. Gay classes, at p. 497, hæmorrhoidal disorders into: 1. Anal or plexiform varicosity; 2. Hæmorrhoidal varix—sacular or erectile—the true pile; 3. Hæmorrhoidal varicosity, or the varicose hæmorrhoidal vein. The first of these

forms displays itself as a tense and well-defined welt, at the extreme verge of the anal aperture. It is usually associated with 'true piles'. The third variety occupies the larger hæmorrhoidal branches, and betrays itself in those large bloated veins which are often seen in hæmorrhoidal persons, running up the bowel and bearing a very forbidding aspect. On the subject of treatment, Mr. Gay has little new to advance, but he enters a protest against the habit of what is called 'bringing down the piles' by exciting exaggerated peristalsis, preliminary to operation, since, by such a procedure, the true condition of the diseased parts is obscured. The preliminary treatment should be confined to that which will place the patient in the best state of health of which his system is susceptible, and the parts in the utmost state of possible quiet, for purposes of operation, and for some few days after operative proceedings.

3. *Williams on a remarkable Case of Recto-Vesical Fistula and Fæcal Calculus in the Male.*—Mr. W. Roger Williams, in the *Lancet*, Oct. 1881, p. 588, gives the history of a man, aged 79, who, a year and a half before being seen, suffered from frequent and painful micturition. No stone was found on sounding, but a sensation of roughness was felt. A few days before his death it was supposed that he had passed urine *per anum*, but the fact was not positively confirmed. On examination, fifteen hours after death, the bladder *in situ* appeared small and projecting, but otherwise healthy. It felt firm, as if containing some not very hard substance. On section, this was found to consist of brownish-black material, of a doughy, and in parts, coriaceous consistence, made up of irregular-shaped pellets about the size of large peas, like 'mincemeat'. It weighed an ounce and a quarter, and had an urino-fæcal odour. At its base, the bladder opened into the rectum by an aperture that admitted a crowquil. In this case, there was no history of early symptoms. The only really valuable sign that could have led to a correct diagnosis was the admixture of urine with the fæces—a fact that attracted neither the attention of the patient nor of his attendants.

4. *Stocker on Dugas' Pathognomonic Sign of Dislocation of the Humerus.*—Mr. J. R. Stocker illustrates the value of this sign in an obscure case that fell under his observation (*Lancet*, Oct. 1881, p. 608). At first the case seemed to be one of fracture at the anatomical neck of the humerus, but the hand of the injured arm being brought across the chest to the opposite shoulder, showed that the elbow could not be approximated to the chest. This sign depends upon the fact, that it is impossible for a straight line (the humerus) to touch the convexity of a curved line (the thorax) at more points than one at the same time.

5. *Walker on complete Severance of the Jejunum.*—Mr. W. Walker, in the *Lancet*, Oct. 1881, p. 627, reports an interesting case where death occurred in a lad, aged 19, twenty-seven hours and a half after a fall. Examination on admission detected no grave injury, and although importunate to get up and walk, the patient was confined to bed, and placed on milk and broth diet. Twenty-six hours after the accident he was apparently going on satisfactorily; but, half an hour after his evening meal of bread and milk, he developed fatal symptoms of peritonitis. The *post mortem* examination revealed a complete severance of the jejunum, as it lay over the vertebral column. The rupture formed a regular circle, with the edges inverted and frayed, as if the separation had been produced by a blunt pair of scissors. The ends were in good apposition. The case is in many respects unique. [A very singular case, where the jejunum was ruptured in two places by a ploughman stepping into a deep hole, is recorded in the London Medical Record, 1878, p. 341. In the *Brit. Med. Jour.*, Oct. 1879, p. 535, a somewhat similar case is reported.] Richard Neale, M.D.

6.—*Judson on Rupture of the Plantaris Muscle.*—In *The New York Med. Jour. and Obstet. Rev.*, July 1881, Dr. A. B. Judson gives three cases in which he diagnosed this injury. He remarks that it is seldom found described in systematic works on surgery, although its occurrence is probably not very uncommon. Its most remarkable feature is the trivial nature, or almost entire absence, of an immediate cause. Persons are attacked while quietly walking in the street, stopping suddenly under the impression that they have been shot in the leg. Apart from ecchymosis, which is met with in but a limited number of cases, the only objective signs are œdema and deep-seated induration, and these are by no means constant. If there be an obvious gap in the muscles, with an adjacent muscular tumour, the case is to be considered one of rupture of muscles, the term *coup de fouet* being conveniently used to indicate those cases in which the exact lesion remains undetermined. The diagnosis depends on (1) the suddenness of the attack; (2) the insignificance of the apparent cause; (3) the location of the trouble; (4) the pain, which is absent or slight when the part is at rest, and produced or aggravated by those motions of the limbs, active or passive, which disturb the muscles of the calf; and (5) the great disproportion between the objective and subjective symptoms. Recovery is always protracted, and is probably not much facilitated by treatment; which, however, should not be neglected, for the prognosis is sometimes unfavourable, especially when the affected limb is the seat of deep varicose veins, or shows traces of former phlebitis. Local and general remedies should be directed toward the relief of pain. Repair of the injured structures should be promoted by preventing motion or disturbance of the part affected. The condition which seems best adapted to secure this object is that of enforced fixation, with the knee moderately flexed and the ankle moderately extended. As recovery progresses, locomotion will be facilitated by a high-heeled shoe, which prevents the foot from being unduly flexed on the leg. Cases of this injury present opportunities for the exercise of judgment, in the decision of the question of abandoning further rest and resorting to motion and exercise.

7. *Roll on Defer's Treatment of Simple Hydrocele.*—Dr. Roll (*Thèse de Paris; Bull. Gén. de Thérap.*, Aug. 30) favours this treatment. The hydrocele is punctured with cannula and trocar as usual, and evacuated; through the cannula is introduced a sound, on the end of which is fused a little piece of nitrate of silver; the interior of the tunica vaginalis is then rapidly touched at different points with this caustic, when the sound, and after it the cannula, are withdrawn. The results of this mode of treatment are said to be excellent. Notwithstanding the occurrence of a sharp inflammation lasting five or six days, a cure is generally obtained, not by adhesion of the two surfaces of the tunica vaginalis, but by a simple vital modification of that membrane. The return of the effusion is rare. Defer's operation is thus described as perfectly safe, thoroughly efficacious, and easily performed.

8. *Pletzer on Intermittent Dropsy of the Knee.*

—In the *Deutsche Med. Woch.*, No. 37, Dr. Pletzer describes the case of a woman, aged 40, suffering from intermittent dropsy of the knee, which made its appearance at irregular intervals, and defied all treatment. She had been under the author's observation for twelve years. Only the first time the swelling was attended with fever. After that, there was no recurrence of fever. Its approach was preceded for a few days by uncomfortable sensations. During the first four years, the swelling of the right knee set in every three months, independently of the menstrual period or of pregnancy. There was no hereditary disposition to rheumatism or gout, no previous intermittent fever, nor any traumatic cause. After using the baths at Neundorf, the patient was seized with attacks, which were more frequent, but of shorter duration, the intervals being five days, and the pain and swelling lasting six days. Four years ago, the patient went to Meinberg, and was treated with carbonic acid in every form in which it could be given. The dropsy disappeared, but the general condition of the patient became worse, and all the symptoms of Basedow's (Graves's) disease appeared. When, four months afterwards, the dropsy set in once more, with its accustomed interval of eleven days, her condition changed for the better, and the symptoms of Basedow's disease at once disappeared. The only remedy which had a good effect was Fowler's solution, which shortened the attacks. Pregnancy, in 1879, put an end to the dropsy; but, eight weeks after delivery, the symptoms of Basedow's disease returned, together with the first catamenial discharge, which was rather copious. The patient was then sent into the country, and the last news received about her indicated that the dropsy had again set in, but that the general condition was much improved. The author regards this disease as a vaso-motor neurosis, which supposition is rather confirmed by the appearance of Basedow's disease.

9. *Jersey on Rupture of the Internal Lateral Ligament of the Knee-Joint.* — Dr. Charles A. Jersey (*New York Med. Jour.*, June 1881) has been recently studying rupture of the internal lateral ligament of the knee-joint; and, from the study of two cases in the living subject and five attempts at rupture of the internal lateral ligament on the cadaver, comes to the following conclusions. First, many cases of so-called ruptures of the internal lateral ligament of the knee-joint are in reality cases of fracture of the internal tuberosity of the condyle. Second, many of the more severe sprains are fractures of the tuberosity. Third, the absence of bony crepitus is no certain sign of the non-existence of fracture at this point. Fourth, this diagnosis rests upon the extreme lateral motion, the severity of the pain on manipulation, the localised pain always found at a certain point, and the length of time required for complete recovery.

10. *Gibney on the Management of Orthopædic Cases.* —Dr. Virgil P. Gibney, assistant-surgeon to the Hospital for the Ruptured and Crippled, at New York, read a paper upon this subject before the Kentucky State Medical Society, Lexington, on May 20, 1880. The paper before us is reprinted from the *New York Medical Herald.* Orthopædic cases are essentially chronic, are always troublesome to deal with, and generally present individual peculiarities which must be managed in accordance with their individual requirements. Pott's disease, in which the upper dorsal or cervical region is involved, will require some such support as a jury-mast; but the management of an expert is necessary, to adapt the apparatus satisfactorily. The author urges that whatever apparatus is used, it will not cure the patient without the careful attention of the surgeon. In dealing with abscesses in these cases, the advice of Billroth should generally be followed, and the abscess allowed to take its own course. But when some vital organ is pressed upon by the collection of pus, the knife should be used freely. [The aspirator is not referred to.] In lateral curvature, the early use of apparatus, when at all practicable, is especially desirable. It will prevent, if not cure. If the vertebræ be rotated, there is no apparatus that will rotate in the opposite direction. There are many cases in which an apparatus that exerts long continued pressure on muscles, does actual harm. Gymnastics are a *sine quâ non.* Disease of the hip-joint always begins as a central disease of bone. Of 560 cases, 353, or 63 per cent., began before the fifth year; 290, or more than 50 per cent., began between the third and fifth years; only 39 began after the tenth year. Some periarthritic affections are often mistaken for the genuine disease. Cases of real hip-joint disease never recover with perfect joints. The treatment should be especially directed to the general health, whatever may be the surgeon's theory with regard to the pathology. Extension is beneficial, and some cases do well with a raised sole on the sound foot. [This was first employed by H. O. Thomas, of Liverpool.] Abscesses should not be too readily opened. Excision of the diseased portion of bone should only be employed as a *dernier ressort.* Club-foot, if congenital, and treated from birth, can be dealt with by bandaging to a simple splint, by which means talipes varus can be reduced to equinus, and the tendo Achillis subsequently divided. Acquired club-foot, usually the result of paralysis, often requires tenotomy, and careful management in the after-treatment. Electricity is useless.

11. *Webb on the Treatment of Spinal Curvature and Chronic Abscess.*—(*Australian Med. Jour.*, Jan. 1880.) In this pamphlet, Sayre's plan of treatment by plaster-of-Paris jacket and suspension is extolled. The author considers that daily suspension alone will cure cases in the early stages, but that, if the disease be far advanced, suspension, with or without the jacket, causes abscess. In advanced cases, the jacket is to be used alone. Fourteen cases were treated by daily suspension, some with and others without a jacket; of these, nine recovered, three died, and two remained under treatment. In those that died suspension was supposed to be employed injudiciously. A simple form of suspension was used daily for as long a time as the patient could conveniently bear. To counteract the very unsatisfactory and ordinarily fatal termination of large chronic abscess, the septic cavities were inflated with carbolised air. The results of inflation were satisfactory to the operator. E. NOBLE SMITH.

PATHOLOGY.

RECENT PAPERS.

1. DUBOUÉ, PASTEUR, and GALTIER.—On Hydrophobia. (*Le Progrès Méd.*, 1881, No. 38.)

2. FOOT, A. W.—Cirrhosis of the Lung. (*Path. Soc. of Dub.*, February 1881.)

3. CHANTEMESSE.—Hypertrophic Cirrhosis with Jaundice. (*Le Progrès Méd.*, 1881, No. 38.)

4. KEY, A., and BRUZELIUS, R.—Thrombosis of the Portal Vein. (*Hygiea*, 1880; and *Nord. Med. Arkiv*, Band xiii.)

5. Key and Wising.—Primary Cancer of the Bile-Ducts. (*Ibid.*)

6. Martin.—Visceral Lesions as a Sequel to Obliterative Endocarditis. (*Rev. de Méd.*, May 1881.)

7. Greenfield.—On Anthrax. (*The Veterinarian*, October 1881.)

8. Kraunhals.—Fungoid Vegetation in the Animal Organism. (*St. Petersb. Med. Woch.*, Feb. 21, 1881.)

9. Polaillon.—Congenital Chancre of a Portion of the Diaphragm. (*L'Union Méd.*, July 14.)

10. Jarisch.—The Coincidence of Diseases of the Skin, and of the Grey Matter of the Spinal Cord. (*Vierteljahrs. für Derm. und Syph.*, 1880, p. 195.)

11. Penzoldt.—Thrombosis of the Carotid Artery. (*Deutsch. Archiv für Klin. Med.*, Band xxviii.)

12. Kummel.—Glioma of the Pons Varolii and Medulla Oblongata. (*Zeitsch. für Klin. Med.*, Band ii.)

13. Zunker.—Function of the Anterior Gray Column of the Spinal Cord. (*Zeitschr. für Klin. Med.*, Band ii.)

1. *Duboué, Pasteur, and Galtier on Hydrophobia.*—In a leading article, *Le Progrès Méd.* (No. 38, 1881), refers to recent observations and writings on hydrophobia. M. Duboué, of Pau, published last year a pamphlet entitled *The Pathological Physiology and the Rational Treatment of Hydrophobia*, in which he maintained that 'the producing agent of hydrophobia is not absorbed, but is propagated insensibly along the nerve-fibres which have been attacked by the virus; that the nerve-fibres affected are probably only the sensory fibres; and that the virus passes very slowly upwards from the lesion to the medulla oblongata, but spreads centrifugally very quickly, the symptoms commencing when the virus reaches the medulla.' He describes microscopical changes in the nerve-cells and fibres, consisting of opacity and granular degeneration, which he regards as the primary lesions. This theory has lately acquired importance, as M. Pasteur, in a recent communication to the Academy of Sciences, has expressed the opinion that the medulla is the principal seat of the reception of the virus. M. Pasteur has found that the cerebral substance and the cerebro-spinal fluid contain the virus, and may be used for inoculation, and that the most certain results can be obtained by trephining a dog's skull, and inoculating directly on the surface of the brain, the cerebral substance from a dog which had suffered from hydrophobia; a dog so inoculated shows the first symptoms in one or two weeks, and is dead in less than three weeks. M. Galtier of Lyons is seeking for some means to attenuate the virus, in the hope of succeeding in discovering a means of 'vaccinating' hydrophobia. He has found that whenever the virus was injected into the jugular vein it was not followed by the disease, while dogs so inoculated remained proof against further attempts to impart the malady.

2. *Foot on Cirrhosis of the Lung.*—Dr. A. Wynne Foot (Path. Soc. of Dublin, February 5, 1881) showed a specimen of cirrhosis of the left lung taken from a policeman who had been on duty seven days before his death. He had been in the band. When he came to Dr. Foot, he had hectic, night-sweats, dyspnœa, cough, copious viscid yellow sputa, no hæmoptysis, and the upper part of the left lung was immobile; dull and crackling sounds were heard over it. He died from profuse hæmoptysis. The left lung was reduced to two-thirds its size, condensed and indurated, and adherent to the costal pleura. The lung-structure was iron grey, the pleura was very thick and cartilaginous, sending greyish bands into the lung-tissue, and the bronchi were dilated. There was tubercle in both lungs, and there were two cavities in the apex of the right lung.

3. *Chantemesse on Hypertrophic Cirrhosis with Jaundice.*—M. A. Chantemesse (*Le Progrès Méd.*, 1881, No. 38) reports a case of hypertrophic cirrhosis with jaundice, as described by Hanot, and defends it against those German authors who have denied its right to be considered a pathological entity. In this case the patient, a man aged 57, had jaundice for five years. He had never suffered from malaria, gout, rheumatism, syphilis, or alcoholism. The liver was enlarged, extending four finger-breadths below the costal border. The spleen was very large. The urine contained bile, but no albumen or sugar. His feet and ankles were œdematous. Later on the œdema increased, the abdomen became swollen, the skin covered with petechiæ, with friction and *râles* in the thorax, and, finally, coma and death. At the necropsy, the liver was found smaller than it had been, but weighed 1,800 grammes (6½ lbs.); portions of it were in a state of acute yellow atrophy; there was much increase of fibrous tissue, which, under the microscope, was seen to penetrate the lobules, and contained an abundant network of biliary canaliculi. There was no ascites present, but the peritoneum was studded with tubercle.

R. Saundby, M.D.

4. *Key and Bruzelius on a Case of Thrombosis of the Portal Vein.*—Professor Axel Key and Dr. R. Bruzelius describe, in *Hygiea* for 1880 (*Nord. Medicin. Arkiv*, Band xiii, Häft 2), the case of a woman, aged 47, who was admitted to hospital with considerable ascites and œdema of the lower limbs, extending up as far as the chest. She was greatly emaciated, but was not jaundiced. She gave contradictory accounts of her illness. One day in the previous month, according to her husband's statement, she was seized with severe pain in the abdomen, which lasted two days; within two or three days afterwards, her abdomen swelled considerably; but the swelling of the legs appeared later. As the liver was not diminished, and no nodules could be detected in the abdomen, as the urine was free from albumen, and as no disease was detected in the heart or lungs, the formation of a thrombus in the portal vein was diagnosed, but its cause remained doubtful. At the necropsy, the ductus choledochus, from the liver to its entrance into the duodenum, was seen to be greatly dilated, and to be bent in the form of the letter S. It was about 0.4 or 0.45 inch in circumference; its wall was thickened, the surrounding connective tissue was indurated, the mucous membrane was smoother than usual, but the rugæ was preserved, and there was no trace of ulceration. The duct contained a saffron-coloured mass. The dilatation ended abruptly at the entrance of the duct into the duodenum; here the duct was unchanged and quite permeable. The dilatation was continued into the hepatic ducts and their branches; even the cystic duct was dilated, but it only contained some thin brownish yellow bile; no gall-stones could be found either in it or in the gall-bladder, which was unaltered. Around the vena portæ, at the commencement of its hepatic branches and around the junctions with it of its tributary veins, was found a dirty turbid grey mass of pus with pieces of broken-up connective tissue; the purulent change was greatest at the commencement of the portal vein, on a level with the most dilated part of the ductus choledochus. Here it involved the wall of the bile-duct, which in one place was so much eroded, that only the mucous membrane was found intact. The same was the case with a portion of the duct near its division into the two hepatic

ducts. Surrounded by the broken-down mass lay the portal vein, so greatly contracted as to measure little more than 7 millimètres (one-tenth of an inch) in circumference. Its wall was thickened; the lining membrane was speckled of a reddish grey colour, with brownish or dark grey firmly adherent distinctly raised deposits. The splenic vein was dilated and its wall thickened; the surrounding tissue was indurated; the lining membrane was free from deposits, but was discoloured, and had not its usual lustre. The mesenteric veins and the coronary veins of the stomach were also dilated. The liver was of the usual size, somewhat soft; the spleen and kidneys were without any change worthy of note; the lungs presented hypostatic congestion and œdema. In the peritoneum were nine litres (nearly 16 pints) of fluid, containing fibrinous flakes in the posterior parts; there were fusiform deposits on the peritoneum at the left of the sigmoid flexure and over some old false membranes on the left side of the true pelvis; in other parts the peritoneum was smooth, but somewhat thickened, and showed in several places small organised excrescences of connective tissue. Professor Key explains the pathological changes by supposing that a gall-stone, which was discharged before death, was firmly impacted during life in the duct just before its entrance into the duodenum, and thus caused an impediment to the discharge of bile and dilatation of the ductus choledochus. In consequence, a compression-thrombus of the portal vein was produced, which caused effusion into the abdomen and chronic peritonitis, with dilatation of the roots of the vein; the thrombus subsequently melted down, the vein contracted, and the surrounding inflammation went on to suppuration. The absence of icterus, in spite of the hindrance to the exit of the bile, was remarkable.

5. *Key and Wising on Primary Cancer of the Bile-Ducts.*—The following case is reported by Professor Axel Key and Dr. Wising in *Hygiea* for 1880 (*Nord. Med. Arkiv*, Band xiii, Häft 2). A peasant, aged 35, who had from childhood had feeble health, on February 1, 1880, had dyspeptic symptoms, and on April 1 was attacked with icterus. During April and May, he was treated in hospital for catarrh of the stomach and duodenum, and catarrhal icterus. He was again admitted on October 2. The liver, which when he was first in hospital was enlarged, was now perhaps somewhat larger. The urine was deeply coloured with bile-pigment; the fæces were of a blackish colour. There was a remarkable tendency to hæmorrhage, especially under the skin. He had fever in the evening. There was no reason to suspect the presence of a tumour, and nothing indicated cancer; the diagnosis therefore was uncertain. At the necropsy, the liver was found to be somewhat enlarged and of firm consistence; its parenchyma showed a very marked green colour. On section, an abundance of clear greenish black fluid escaped from the bile-ducts; these had within the liver a diameter of 5 to 10 millimètres (.075 to .15 inch) and near their exit had a lumen of 5 millimètres. The dilatation of the bile-ducts ceased close to the porta: here both hepatic ducts and the common duct had greatly thickened walls, and their lumen was much reduced; the duct was, however, permeable by a large probe, and, on section, was seen to have a lumen of about 5 millimètres. The greatest extent of the thickening was 18 millimètres; the wall here was firm and hard, of an uniform yellow-grey colour, with somewhat distinct yellow streaks and clots. In the thickened part, the different coats of the wall of the bile-duct could not be separated; the mucous membrane was a little changed on the surface, and ulcerated in some parts; it nowhere presented any villous excrescences. The ductus communis choledochus and the gall-bladder were collapsed, but unaltered in structure. The lungs presented hypostatic congestion and œdema; under the skin, among the trunks, and in the intestinal mucous membrane were numerous hæmorrhages. Microscopic examination showed that the thickening of the walls of the bile-duct was dependent on a cancroid growth, consisting of spores filled with epithelial cells, of which some were cylinder epithelium, others cubic or polygonal epithelium. In several places, these cells had undergone fatty degeneration, and the scanty stroma of connective tissue was in parts loaded with glistening fat-globules. The degeneration was altogether limited to the wall itself, and had not invaded the surrounding vessels. Dr. Key remarks that this was the first case in which he has met with primary cancer in the biliary passages. It was remarkable that the retention of bile and distension of the bile-ducts were so thoroughly marked during life, although at the *post mortem* examination the lumen did not appear to be perfectly obliterated. Apparently, in consequence of a greater amount of blood and fluid, the swelling was greater during life than it appeared after death. A. HENRY, M.D.

6. *Martin on Visceral Lesions as a Sequel to Obliterative Endarteritis.*— Martin (*Rev. de Méd.*, May 1881), following up a previous paper, of which an abstract lately appeared in these pages, describes a series of changes in various viscera following progressive obliterative endarteritis. He deals firstly with renal cirrhosis, and, in briefly sketching the morbid anatomy of this condition, lays special stress on the vascular changes. When referring to the cardiac sequelæ of granular kidney, he speaks of the arterio-capillary fibrosis of Gull and Sutton, but points out that Debove and Letulle have gone further, and demonstrated a fibrous change in the heart, not following, but accompanying the renal lesion, both being effects of a general condition—a fibrous diathesis. This fibrous transformation occurs chiefly in the left ventricle. Martin has found that this change is always associated with obliterative endarteritis of cardiac vessels, which is most common and extensive in the left ventricle. In the walls of the right ventricle very few vessels are affected, and only patches of fibrous matter exist there. The lesion there is what he calls dystrophic sclerosis. In senile kidneys, a similar endarteritis causes sclerosis of the organs themselves—a change in old age only second in frequency to atheroma. The connection between cardiac lesions and tabes dorsalis was first observed by Berger and Rosenbach, who found the spinal lesion in association with aortic insufficiency. Grasset attributed the aortic disease to reflex action, from the severe pains suffered by the patients. Letulle has studied some cases, and thinks that chronic arteritis is the cause of both cardiac and spinal lesions in this association. Martin has worked out such a case, and has found that the spinal lesion is caused by chronic endarteritis of the vessels supplying the posterior root-zones, all the other meningeal vessels being healthy, and he is convinced that this arterial lesion is never absent. Martin describes acute progressive endarteritis in diphtheria, and gives as an example an instance of diphtheritic broncho-pneumonia. He also speaks of the acute progressive endarteritis of typhoid fever with a case of typhoid myocarditis dependent, like the broncho-pneumonia, on endarteritis.

He closes his work with the following conclusions: 1. The internal tunic of most arterioles is exposed during almost the whole of life to conditions causing irritation. 2. The consequent progressive obliterative endarteritis begins in young children in certain nutrient vessels at the origin of the aorta, but, later, attacks others vessels, by preference, however, in organs with active circulation. 3. The progressive diminution of the nutritive supply of the organs causes an atrophy of functional elements and a development of fibrous tissue, beginning at the furthest point from the diseased vessels, where the nutrition is worst. This fibrous change he calls dystrophic sclerosis. 4. The recognition of this endarteritis accounts for many visceral scleroses, and gives a connecting link binding them together. 5. Progressive endarteritis may occur in an acute form in infectious diseases, and this, if attacking an important organ, may rapidly kill the patient. 6. The irritant particles in the blood, especially in certain states (alcoholic, saturnine, gouty, etc.), must exaggerate and hasten the evolution of the endarteritis. 7. The proliferative lesion beginning in the endarterium may be localised there or spread beyond. Sometimes it predominates beyond, and then the early phases of the morbid process must be grasped to understand the beginning, localisation, and evolution of the lesion. GEORGE A. GIBSON, M.D.

7. *Greenfield on Anthrax.*—It has been ascertained by Duguid and Sanderson that bovine animals inoculated with anthrax-virus suffer only from a very mild form of the malady, chiefly consisting in a febrile rise of temperature, which, however, after a few days leads to perfect recovery. Animals so inoculated remain safe against further contagion. Professor Greenfield (*The Veterinarian*, October 1881) by new and important experiments, fully confirms, and, to a considerable extent, extends the above results. Four heifers, A, B, C, and D, were used for experiment. Heifer C was inoculated with cultivated bacillus anthracis of the third generation. The next day the animal showed rise of temperature and other signs of constitutional disturbance, besides swelling at the seat of inoculation. About the fourth day both the local and general symptoms had reached their maximum (temperature 106) and then declined. On the eighth day recovery had set in. No pustules had been observed during the illness in any part of the skin, nor had bacilli been found in the blood of the ear. At the end of ten weeks, the animal being in perfect health, it was again inoculated, but this time with anthrax-virus from the guinea-pig. The spleen of the animal, swollen and swarming with bacilli, was reduced to a pulp, mixed with water, and the entire quantity injected beneath the skin of the flank of the above heifer. Not the slightest symptom, either local or general, followed this inoculation. Heifer D was inoculated with the eighth generation of artificially cultivated bacillus anthracis. Only a slight rise of temperature was observed the next day. A week later it was again inoculated with the seventh generation of cultivated bacillus anthracis, but without any other effect beyond a small local swelling. Three months later it was inoculated with half a drachm of blood of a man, a woolsorter, who had died of general anthrax (woolsorters' disease). The blood was fresh and swarming with bacilli. Inoculated into rodents, this blood produced typical anthrax. The heifer D thus inoculated suffered from a very severe illness, rise of temperature, great general prostration, and much local swelling. On the fifth day the condition began to improve, and the animal speedily recovered. A month later both heifers, C and D, were inoculated with the blood of a cow that had died of splenic fever. This blood produced typical anthrax in rodents, and was swarming with bacilli. In heifer C a slight rise of temperature (half a degree) was observed on the following day, but in neither case were there any symptoms indicating disease. Two other heifers, A and B, having been five months previously inoculated, and thus made immune, were subjected to subcutaneous inoculation with one drachm of blood (swarming with bacilli) of a sheep that had died of general anthrax. No effect was produced. Subsequently the heifers, A, C, and D, were placed under conditions in which they in all probability would have contracted splenic fever, had they not been made immune by previous inoculation. They were, transfered to fields in a sewage farm at Harden, near Bingley, in which several cases of anthrax in cattle and sheep had occured previously to and after their arrival. These fields were supplied with sewage, by far the larger quantity of which consisted of 'sud-water' of a mill, where bad Van mohair is used. Several cases of woolsorters' disease had occurred among the workers in this mill, and it is now known that Van mohair is often considerably contaminated with anthrax-virus. From Dr. Greenfield's inquiry, there can be little doubt that the cases of anthrax in cattle and sheep that occurred in this sewage-farm were directly due to the poison of anthrax, conveyed in the sud-water from the mill to the fields. The above heifers, A, C, and D, were kept in these fields for three months; and, although two cases of anthrax had subsequently occurred in sheep pasturing in these fields, the heifers remained well. E. KLEIN.

8. *Kraunhals on Fungoid Vegetation in the Animal Organism.*—In 1869 and 1870, Grohe and Block succeeded in so cultivating ordinary fungi that they grew when injected into the living body. These results were not confirmed till quite recently, when P. Grawitz (Virchow's *Archiv*, Band lxxxi), after numerous ineffectual attempts, was able to obtain similar facts. He carefully cultivated fungi in various substances and at various temperatures, till at last they grew on alkaline albuminous fluids at a temperature of 38 to 40 deg. Cent. (100.4 to 104.0 Fahr.) When the fungi (generally Penicillium and Eurotium) were then injected into the blood-vessels of animals, they grew and produced mycellium in the internal organs. Kraunhals (*St. Petersb. Med. Woch.*, Feb. 21, 1881) repeated Grawitz's experiments, and he describes the *post mortem* appearances in two animals into which he injected the fungi. The spores were taken from a crust of bread covered with fungous vegetation, and were served on bread which was mixed with water so as to form a thick paste. From this they were transferred to an infusion of bread kept at the ordinary temperature. The next generation grew at a temperature of 30 deg. Cent. (86 deg. Fahr.), and the following one at 38 to 40 deg. Cent. Two per cent. of cane-sugar was then added to the next infusion of bread. The following one contained a small quantity of bicarbonate of soda so as to make it almost neutral; and in the following cultivations the sugar was reduced and ultimately left out, while the alkalinity of the infusion was gradually increased. Of this fluid, containing only spores and no mycelium, 1½ Pravaz's syringefuls were injected into the jugular veins of a young rabbit. This animal died thirty-two hours later. A much smaller quantity was introduced into a guinea-pig, which died in twenty-six hours, and a

similar quantity from another cultivation killed a guinea-pig in thirty hours. The *post mortem* examination gave a negative result; but, on microscopic examination of the organs, it was found that these spores had germinated, and mycelium was found in various parts. This was chiefly seen in the kidneys, almost all the glomeruli being the seat of delicate mycelium-threads. After the kidney came the liver, and then the spleen and muscular tissue of the heart. There were only a few short threads in the kidneys. Kraunhals thinks that it would be premature to draw any conclusions from these facts.

W. Watson Cheyne.

9. *Polaillon on Congenital Absence of a Portion of the Diaphragm.*—The author (*L'Union Méd.*, July 14, 1881) considers this malformation to be a cause, though a rare one, of death among still-born children. Its diagnosis is not easy; and Isidore Geoffroy St. Hilaire has observed that, as a rule, it is not accompanied by any external defect of development. Congenital fissures of the diaphragm may appear simply as small round holes, generally in its muscular portion, or may occupy half its normal area, in which extreme form the pleura and peritoneum may coalesce and prevent abnormal communication between the thoracic and abdominal cavities; but the serous membranes are generally deficient, and the abdominal viscera invade the thorax. The malformation appears to be one-third more frequent on the left than on the right side, and large fissures on the left side are the cause of rapid death after birth, owing to displacement of the heart by the abdominal viscera, which rise into the left pleural cavity. When the diaphragm is deficient on the right side, the child lives at least some hours, and life has been prolonged in a few cases to three and to five and a half years. After describing two cases of extreme deficiency of the diaphragm (in the *Lancet*, vol. ii, 1879, p. 503, the second in the author's own practice), Dr. Polaillon observes that, in some recorded instances of this malformation, the sounds of the child's heart before birth were known to have been normal. After birth, the movements of respiration involve obvious complications, when the diaphragm is deficient. The chief symptoms observed in these cases, when the child has lived a few hours, are: displacement of the heart, most characteristic when that organ lies considerably to the right of its normal position; extreme dyspnœa with marked thoracic respiration and violent inspiratory efforts; and the production of borborygmi on applying pressure to the base of the thorax. When the infant survives for several weeks, auscultation will detect complete absence of vesicular murmur on one side of the thorax, with borborygmi during deep inspiration. Resonance on percussion will be impaired, and there will be complete dulness at parts where solid abdominal organs, like the liver, have been pushed upwards. Treatment is of no avail; and at birth, insufflation must be performed with caution, lest air be introduced into the alimentary canal, producing tympanites, which must inevitably increase the displacement of the abdominal viscera and hasten death. Small fissures of the diaphragm do not bring about rapidly fatal results, but predispose the patient to diaphragmatic hernia. Dr. Polaillon does not enter into any questions concerning this affection; but Dr. Lacher (*Deutsch. Arch. für Klin. Med.*, vol. xxvii, and *Brit. Med. Jour.*, July 30, 1881, p. 171) has found, in collecting 276 cases of diaphragmatic hernia, that 123 are recorded as congenital, 143 acquired, and 10 uncertain as to origin.

Alban Doran.

10. *Jarisch on the Coincidence of Diseases of the Skin and of the Grey Matter of the Spinal Cord.*—This author has examined the spinal cord of a patient who had suffered from severe herpes iris with fever, and who, without affection of motion or sensation, died of pulmonary inflammation and chronic Bright's disease, acute bed-sores having developed over the sacrum. He found (*Vierteljahr. für Dermat. und Syph.*, 1880, p. 195) well-marked changes in the grey matter of the cord, the central and posterior parts of both anterior horns spongy in texture or brittle; and symmetrical areas of lateral degeneration from the second to the fifth cervical nerve. Most of the ganglion-cells in the anterior horns from the third cervical to the eighth dorsal vertebra were coarsely granular with thickened processes, set in a coarse reticular stroma. This alteration was best marked where Charcot supposes the trophic centres for the skin to exist. In three cases of syphilis, Dr. Jarisch found circumscribed areas of degeneration in the central parts of the anterior horns, with coarsely granular or shrunken ganglion-cells. In a case of chronic psoriasis, and a case of acute erythematous lupus, he found sclerotic areas in the same position.

11. *Penzoldt on Thrombosis of the Carotid Artery.*—Thrombosis of the carotid arteries generally results from the extension of a clot formed in an aneurysmal dilatation of the arch of the aorta, of the innominate or of the subclavian artery. The author communicates (*Deut. Archiv für Klin. Med.*, Band xxviii, Heft 1, pp. 80-93) two cases of local thrombus-formation. In the first case the symptoms began with sudden disturbance of vision, and loss of pulsation in the right carotid. Later, left hemiplegia and hemianæsthesia followed. In the course of a year a partial improvement took place, followed, however, by occasional epileptiform attacks and return of the paralysis. On *post mortem* examination, there was found thrombosis of the right carotid, with a large area of cerebral softening in the right hemisphere. In the second case, there was for years mental disease of the nature of general paralysis. One day the patient suddenly fell down, and two days later he died. The *post mortem* examination showed thrombosis of the left carotid and of the middle cerebral artery, with an area of softening in the corpus striatum. In the first case, it was doubtful whether the thrombus was autochthonous or embolic; in the second, it was almost undoubtedly autochthonous. The author asks why cerebral disease should follow thrombosis of the carotid artery, when it seldom follows ligature of that vessel; but says he can give no answer on the point.

12. *Kümmel on a Case of Glioma of the Pons Varolii and Medulla Oblongata.*—The case (*Zeitsch. für Klin. Med.*, Band ii, p. 230) was that of a man, aged 23, who received a severe blow on the head. He recovered after several days' unconsciousness: but in the course of the following year became affected with a rapidly increasing paralysis of the left facial, sixth, and ninth nerves, accompanied by left-sided deafness, vertigo, and tottering gait. A few days after admission into the hospital, he died of pneumonia. The *post mortem* examination showed a diffuse gliomatous hypertrophy of the pons, medulla oblongata, and corpora quadrigemina, especially of the left side, also hypertrophy of the crura cerebri, the optic nerves, the third nerves, and the upper part of the spinal cord. There was no circumscribed tumour; and an enlargement of the individual fibres of the third nerve showed that the nervous elements, as well as

the neuroglia, took part in the formation of the tumour.

13. *Zunker on the Function of the Anterior Grey Column of the Spinal Cord.*—The first symptoms of disease in the case of a man, aged 33, reported by this author (*Zeit. für Klin. Med.*, Band ii, p. 355) were pain, and a feeling of cold in the right calf. Soon there appeared strangury and paralysis of the right lower limb, especially the extensors of the leg and the adductors. Pressure on these flabby muscles was painful; the tendon-reflexes were absent; the sensibility on both sides was diminished as far as the knee. The electric irritability was at first little altered, but later it failed entirely for the indirect faradic stimulation; direct faradic stimulation produced slight vibrating contractions. With the constant current, the muscles of the thigh gave weak contractions, abnormal only in that the contractions of the negative and positive poles (on closing the current?) lay very near each other. A marked plantar reflex was present, while the tendon-reflexes failed. Ultimately there appeared sharp shooting pains in the lower extremities, involuntary contraction of the flexors, and bed-sores. Both lungs were partly destroyed by a diffuse ulcerative process. In the lumbar part of the spinal cord, between the second and fourth pairs, especially on the right side, was a reddish-grey translucent mass, which proved to be tubercular. The grey substance was entirely replaced by the tumour, the large ganglion-cells had disappeared, and there were an ascending degeneration involving the postero-median column, and a peripheral segment of the lateral column, and a descending degeneration of the crossed pyramidal tracts. The nerve-roots in the neighbourhood of the disease were intact, but the branches of the anterior crural nerve were thin, grey, and varicose, and there were the usual appearances of atrophy in the affected muscles. The other nerves and muscles of the lower extremities were comparatively normal.

James Anderson, M.D.

DISEASES OF THE THROAT.

RECENT PAPERS.

1. Schiffers. — Laryngeal Syphilis Complicated with Acute Respiratory Paralysis. (*Jour. de Méd.*, Jan. and Feb., 1881; *Revue Mens. de Laryng.*, etc., June 1881.

2. Seiler.—Syphilitic Laryngitis. (*New York Med. Gaz.*, May 1881.)

3. Anderson, McCall.—Bilateral Paralysis of the Vocal Cords. (*Brit. Med. Jour.*, June 18, 1881.)

4. Schiffers.—Paralysis of the Posterior Crico-Arytenoid Muscles. (*Revue Mens. de Laryn.*, etc., June 1881.)

5. Guinier.—Case of Ephemeral Tumour of the Larynx. (*Revue Mens. de Laryn.*, June 1881.)

6. Whipham.—Aortic Aneurism Encroaching on the Trachea, demonstrated during Life by the Laryngoscope. (*Brit. Med. Jour.*, May 1881.)

7. Paton.— A Case of Croup treated by Passing Catheters into the Trachea by the Mouth. (*Brit. Med. Jour.*, May 21, 1881.)

8. Sanctuary.—Tracheal Catheterism in Croup. (*Brit. Med. Jour.*, June 25, 1881.)

9. Wagner.—Habitual Mouth-Breathing. (*New York Med. Rec.; Med. Soc. of New York*, April 25, 1881.)

10. Gemmell.—Fibrinous Casts of the Larynx and Trachea. (*Brit. Med. Jour.*, June 1881.)

11. Gaillard.— Repeated Epistaxis; Cauterisations with Perchloride of Iron; Death; Deposit of Iron upon the Arachnoid. (*Progrès Med.*, April 2, 1881.)

12. Hartmann. — Rhinoscopic Operations. (*Berl. Klin. Woch.*, June 6, 1881.)

13. Zuckerkandl.—On an Abnormal Condition of the Lingual Arteries. (*Wiener Med. Woch.*, July 16, 1881.)

14. Whipham and Pick.—Extirpation of the Larynx. (*Brit. Med. Jour.*, April 9, 1881.)

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1. *Schiffers on Laryngeal Syphilis Complicated with Acute Respiratory Paralysis.*—The author (*Jour. de Méd.*, Jan. and Feb. 1881; and *Revue Mens. de Laryng.*, etc., June 1881) reports a case of laryngeal syphilis, with absence of lesions of the pharynx and isthmus of the fauces. The chief symptom was intense dyspnœa, due to the faulty action of the crico-arytenoid muscles. The paralysis Dr. Schiffers regarded as occasioned by the infiltration of these muscles, consecutive to that of the mucous tissue. Electricity, injections of morphia, and mercurial inunctions were used to relieve the paralysis, and iodide of potassium was given.

2. *Seiler on Syphilitic Laryngitis.*—The author (*New York Med. Gaz.*, May 1881) lays much stress, in the diagnosis of this affection from non-specific inflammation of the larynx, on the peculiar carmine discoloration of the mucous membrane and the symmetrical disposition of the inflammatory patches in the syphilitic affection. Another diagnostic sign is the red line observed upon the velum palati. Dr. Seiler recommends as treatment, besides the systemic and supporting, local touching of the shallow ulcers with solid nitrate of silver fused upon an aluminium probe, and of the deep ulceration with acid nitrate of mercury (1 to 4), or the galvanic cautery.

3. *Anderson on Bilateral Paralysis of the Vocal Cord.*—Dr. McCall Anderson details a case (*Brit. Med. Jour.*, June 18, 1881) of paralysis of the adductors and abductors of the glottis, due to the presence of a large aneurism of the transverse portion of the arch of the aorta pressing on the left, and to a slighter extent on the right, recurrent laryngeal nerve. The diagnosis was verified by a *post mortem* examination.

4. *Schiffers on Paralysis of the Posterior Crico-Arytenoid Muscles.*—This case is published in the *Revue Mens. de Laryng.*, etc., June 1881. The patient, aged 32, of a nervous temperament, had suffered for some months from constant dyspnœa. On laryngoscopic examination, the cords were seen to approach when *a* and *e* were sounded, but they did not separate when an ordinary inspiration was made. During a forced inspiration, the glottis narrowed and was reduced to a chink a line in width. Dr. Schiffers judged this case to be one of hysterical paralysis. Repeated applications of electricity effected a cure.

5. *Guinier on a Case of Ephemeral Tumour of the Larynx.*—The following case of aphonia (*Revue Mens. de Laryng.*, etc., June 1881) is of interest, in that the patient presented two distinct forms of aphonia at the same time—the one incontestably of a hystero-nervous nature, presenting inexplicable intermittences, and only existing in the voluntary movements of the glottis, and the other due to the presence of a pedunculated cyst, and coming on after a certain manner of clearing the throat, or any sudden alteration of the position of the neck. The patient, a lady aged 30, of a nervous temperament, for four seasons attended the thermal course at Cauterets, under Dr. Guinier's care. The first visit was undertaken for aphonia, which had come on five months before, and which Dr. Guinier

diagnosed as of hystero-nervous nature. On her return a year later, aphonia was still present. During this course her voice suddenly returned after an energetic cauterisation of the throat, but two days later as suddenly disappeared again. The following year the aphonia was not constant, but intermittent. During the aphonic periods the sound of coughing, crying, and laughing was normal; the patient would also talk in her sleep. During the periods of return of voice, it was observed that she became suddenly aphonic when she bent her heard forward or coughed in a certain manner. On her third visit to Cauterets, Dr. Guinier discovered a small vesicular or cystic tumour, appearing to proceed from below the anterior angle of the glottic opening. It was pedunculated and freely movable; and if the patient cleared her throat in a certain manner, or inclined her head suddenly, it was retained in the glottis, the vocal cords acting like forceps. At the end of two years from this time, during a fourth thermal course, the tumour grew smaller, and then suddenly disappeared. Since that time, the voice has remained normal.

6. *Whipham on Aortic Aneurism Encroaching on the Trachea demonstrated during Life by the Laryngoscope.*—The patient, aged 49 (*Brit. Med. Jour.*, May 1881, p. 849), was admitted almost speechless with severe dyspnœa. His health had always been good; the present attack came on suddenly. The heart was not obviously out of position; a systolic bruit was heard over the base and to the right of the sternum; no abnormal thrill or pulsation was detected. The pulses in the radial arteries were equal and rather hard; wheezing and stridulous sounds were audible throughout the chest. A laryngoscopic examination was made. The vocal cords were faintly pink, but there was no swelling of the larynx, and all the movements of the cords were perfect. The mucous membrane covering the tracheal swelling were much congested. The patient died in a few hours. At the necropsy, an aneurism was found involving the descending portion of the aortic arch, and the commencement of the thoracic aorta. From the right of the upper part of the sac, a secondary aneurism, with thin soft walls, arose, and this had flattened and produced a certain amount of atrophy of the œsophagus, and had caused the bulging seen in the trachea. The diagnosis during life was that a tumour (in all probability an aneurism) was the cause of both the appearances and symptoms, and the case was adduced as being a rare instance of actual demonstration of an aneurism pressing on the trachea at its bifurcation. The sudden access of the symptoms was possibly explained by the rapid dilatation of the thin walls of the secondary aneurism.

7. *Paton on a Case of Croup treated by Passing Catheters into the Trachea by the Mouth.*—A child, aged three years and ten months (*Brit. Med. Jour.*, May 21, 1881), was suffering from intense dyspnœa and speechlessness. The cough was constant, brassy, and without expectoration. The lips were of a dark livid colour. Dr. Paton, watching an opportunity while the tongue was depressed with a spoon, passed a prostatic catheter into the trachea during an attempted inspiration without difficulty. A severe struggle followed, the face becoming purple. The paroxysmal efforts to repel the tube being unsuccessful, a pretty full inspiration, partly through the tube and partly through the larynx, followed; about two ounces of frothy, bloody, and purulent mucus were ejected by the tube and the mouth, the livid colour disappeared, and the child lay down, breathing easily through the tube. He could swallow milk, although sometimes a little of this was ejected from the tube during a cough. The tube was retained *in situ* by a strip of plaster, and the teeth were prevented from closing on it by means of a pear-shaped piece of hard wood. Six hours afterwards he was much easier, and could say 'yes' and 'no'. The tube was removed without any inconvenience after it had been in the trachea eleven hours, as the child had bitten it, and no air was passing through it. Another ordinary gum-elastic catheter (No. 12) was introduced, only a slight momentary struggle and cough supervening. At the end of the third day the child was so well as to be able to breathe freely without the tube, and was quite well before the tenth day. Dr. Paton is not aware that this treatment has been used in children, but refers to two papers by Dr. Macewen, in the *Brit. Med. Jour.*, July 24 and 31, 1880, on the 'Value of Tracheal Tubes Introduced by the Mouth in Œdema Glottidis' in the case of adults.

8. *Sanctuary on Tracheal Catheterism in Croup.*—The following case is recorded in the *Brit. Med. Jour.*, June 25, 1881. A child, aged two years and a half, was suffering from severe dyspnœa and a sharp clanging cough; breathing hissing, and sometimes crowing, with lengthened inspirations. The sides of the chest and lower part of the sternum were visibly contracted. The lips were of a livid blue colour. A large (No. 12) gum-elastic catheter was introduced without much difficulty, the child's mouth having first been gagged with a cork, and the tongue depressed with a spoon. After a severe paroxysm, the child succeeded in getting a fairly good breath, and mucopurulent *débris* and sticky phlegm were ejected through the tube. In half an hour, the breathing was fairly comfortable. The tube was retained by tape tied round the child's neck, and was removed twenty hours after its insertion. Five days later, she was well.

9. *Wagner on Habitual Mouth-Breathing.*—Dr. Wagner, in a paper read before the Medical Society of New York, April 25, 1881 (*New. York Med. Rec.*), enumerates the causes of habitual mouth-breathing as: Narrowing of the nostrils, growths, false membranes, congenital closure of the posterior nares, cicatricial contractions, foreign bodies, hypertrophy of mucous membrane, paralysis of dilators of the nostril, enlarged tonsils, lingual and sublingual tumours, elongated uvula, adhesions of the soft palate to the posterior wall of the pharynx, and irregular, uneven, and protruding teeth. The effects he mentions are changes in the physiognomy, impairment or complete loss of smell and hearing, chronic catarrhal laryngitis, snoring, pigeon breast, imperfect oxygenation of blood and its consequences, asthma, and acute hyperæmia of the lungs. The treatment depends upon the cause. Dr. Goodwillie's cutting burr is recommended for removing long and cartilaginous obstructions, the snare or galvanic cautery loop for nasal polypi, and slightly curved and olive-pointed metallic sounds for dilating strictural narrowing of the nasal passages. For hypertrophy of the mucous membrane, the following lotion is applied with a brush or on cotton. ℞ Iodinii gra., ii; potassii iodidi, gra. iv; zinci iodidi, gra. x; aquæ, ℥i. Dr. Wagner has removed the tonsils over five hundred times, and has had no accident following the operation.

10. *Gemmell on Fibrinous Casts of the Larynx and Trachea.*—Dr. Gemmell showed, at the Glasgow

Clinical and Pathological Society (*Brit. Med. Jour.*, June 18, 1881), specimens from a boy, aged 8 years, in whom the symptoms began with sudden and severe dyspnœa, laryngeal cough, and slight rise of pulse and temperature. After a slight remission, an exacerbation occurred a few days later, and the cast of the larynx was coughed up. On the eighth day of the disease tracheotomy was required, and thereafter the cast of the trachea and bronchus was coughed up through the tube. The urine became albuminous — great prostration ensued, and three days later the patient died. The temperature was never higher than 101 deg. Fahr., and no exudation was seen in the pharynx till near the end, when it spread rapidly upwards into the nares, and even over the edges of the tracheotomy wound.

11. *Gaillard on Repeated Epistaxis; Cauterisation with Perchloride of Iron; Death; Deposit of Iron upon the Arachnoid.*—The patient (*Le Progrès Méd.*, April 2, 1881), a man aged 55, with no history of hæmophilia, was admitted with copious bleeding of the nose, which had come on three days previously, and had been each day arrested with a plug of lint dipped in perchloride of iron, and applied to the right nostril. After his admission, both the posterior and anterior orifice of the right nasal cavity were plugged with lint. On the third day pus flowed from the left nostril, and on the following day from both nostrils and from the lachrymal puncta. Death ensued a few hours afterwards. At the *post mortem* examination a dark spot, found to contain iron, was observed in the arachnoid on the surface of the right gyrus rectus, around the olfactory nerve, in a situation corresponding to the cribriform plate of the ethmoid. There was no meningitis nor purulent infiltration. On the surface of the cribriform plate of the ethmoid, the dura mater was also black, and the neighbouring part of the frontal bone seemed slightly infiltrated. The nasal fossæ were filled with purulent matter. The mucous membrane, especially on the right side, was easily detached from the bone. The same inflammation was found in the maxillary and sphenoidal sinuses. 'It was evident,' says the author, 'that the perchloride of iron had been the cause of the inflammation of the mucous membrane of the nasal fossæ, and that it had found its way through the holes in the plate of the ethmoid, following the vessels and nerves as far as the surface of the membrane of the frontal lobes, where its presence was demonstrated by chemical reaction.'

12. *Hartmann on Rhinoscopic Operations.*—Dr. Hartmann (*Berl. Klin. Woch.*, June 6, 1881) has devised an instrument as an aid to rhinoscopic investigations and operations, viz., a strongly bent hook provided with a handle, a piece of curved metal being attached to the handle and working upon it by a screw. The hook is passed behind the soft palate, and the curved piece attached to the handle is introduced into the nostrils, pressed against the hook, and there fastened by the screw, thus keeping the instrument firmly in position and the palate well drawn forward. This instrument is well adapted for purposes of autorhinoscopy and in operations undertaken without assistance. In answer to the objection raised by Fränkel, that different shaped faces require different sized instruments, the author asserts that one form and size suffices for all adults.

13. *Zuckerkandl on an Abnormal Condition of the Lingual Arteries.*—The author describes (*Wiener Med. Woch.*, July 16, 1881) the following abnormality. No lingual artery arose from the carotid on the left side. The right lingual artery was nearly twice its usual size; it ran in the normal manner to the right lesser cornu of the hyoid bone, and here divided into two vessels of almost equal size, one of which entered the right half of the tongue to ramify in the normal manner; the other crossed over to the left at the upper edge of the hyoid bone, between the genio-hyo-glossus muscle and the genio-hyoideus, turned forwards along the lateral surface of the left genio-hyo-glossus, and for the rest of its course performed the function of the left lingual artery. The middle portion of the left lingual artery, therefore, was absent from the external carotid to the left genio-hyoglossus. The abnormal artery appears to be merely an enlargement of the normal twigs which anastomose across the middle line in this situation.

14. *Whipham and Pick on Extirpation of the Larynx.*—The patient was a man aged 39 (*Brit. Med. Jour.*, April 9, 1881), in whom extirpation of the larynx was undertaken for a growth originally affecting the left ventricular band and vocal cord, and subsequently involving the whole larynx. An incision was made two-and-a-half inches in the median line of the neck, and a second incision, at right angles to it, across the middle of the thyroid cartilage. On reflecting the skin, the growth was found to involve the left ala of this cartilage. The thyroid cartilage was divided vertically in the middle line, and the two halves separated, when the whole larynx was found occluded by the growth. The left ala was removed, and subsequently the right also. The cricoid cartilage, the remains of the arytenoids, and finally the epiglottis, were cut away. The wound was carefully explored, and all traces of the growth, as far as possible, removed. No vessel required ligature. The operation lasted three quarters of an hour, and the patient was not much exhausted at its close. The wound was plugged with sponges. For two days, progress was satisfactory. On the third day, change for the worse set in, and the patient died on the fifth day after the operation. Right pleurisy and pericarditis, presumably pyæmic, were the chief lesions found at the necropsy. The authors are of opinion that the operation might have been successful, had it been undertaken as soon as the malignancy of the disease became manifest. They also consider the plan of dividing the thyroid cartilage, and removing each half separately, preferable to removing the larynx entire; because, first, the extent of the disease could be better ascertained, and, secondly, there was less danger of wounding important structures.

W. J. Walsham.

OPHTHALMOLOGY.

RECENT PAPERS.

1. Just. — Antiseptics in Eye-Operations. (*Centralb. für die Prak. Augen.*, June 1881).

2. Just.—The Treatment of Hypopyon by Manipulation of the Eye. (*Ibid.*)

3. Chisholm.—The Treatment of Iritis by Salicylate of Soda. (*Ibid.*)

4. Königstein.—Examination of the Eyes of New-born Children. (*Wiener Med. Blätter*, Band iv; and *Centralb. für die Prak. Augen.*, June.)

5. Fuchs.–The Treatment of Gonorrhœal Conjunctivitis by Division of the External Commissure and Fixed Eversion of the Lower Lid. (*Centralb. für die Prak. Augen.*, June 1881.)

6. Samelsohn.—The Ophthalmo-therapeutic Action of Nitrite of Amyl. (Gräfe's *Archiv*, Band xxvii; and *Centralb. für die Prak. Augen.*, June 1881.)

7. Schroeder.—Treatment of Eye-Diseases by Pilocarpin. (*St. Petersb. Med. Woch.*, No. 5, 1881.)

8. De Wecker.—Nerve-stretching in Ophthalmic Surgery. (*Klin. Monats. für Augen.*, June 1881.)

9. Emrys-Jones.—On the Treatment of Ophthalmic Neonatorum. (*Brit. Med. Jour.*, March 1881.)

10. Rahmann.—Amyloid Degeneration of the Conjunctiva. (*Archiv für Augenheilk.*, Band x.)

11. Pagenstecher.—The Extraction of Cataract in Closed Capsule. (*Arch. für Augenheilk.*, Band x.)

12. Bull.—Lachrymal Conjunctivitis. (*Trans. of Med. Soc. of New York*, 1881.)

13. Tartuferi.—On the Cell Forms of the Conjunctival Epithelium. (*Giornale Internazionale delle Scienze Mediche*, Fasc. 9.)

14. Klem, E. — On a Pulsating Orbital Tumour. (*Norsk. Mag. für Lägevid.*, Ser. 3, Band ix.)

15. Asplund, M.—Meningitis after Enucleation of the Eye. (*Hygeia*, 1880; and *Nord. Med. Arkiv*, Band xiii.)

16. Agnew, C. R.—On Incision of the Lacrymal Sac. (*Detroit Lancet.*)

17. Fernandez, J. S.—On Amaurosis from Lesions of the Orbital Region. (*Amer. Jour. of Med. Sciences.*)

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1. *Just on Antiseptics in Eye-Operations.*—Among 200 cataract extractions performed before May 1878, Dr. Just (*Centralb. für Praktische Augenheilk.*, June 1881) had met with not one instance of suppuration. He then adopted the antiseptic methods advocated by Alf. Graefe (*Arch. für Ophth.*, Band xxiv), being led thereto by the good results gained from disinfection of the conjunctiva in cases of cataract complicated by discharge from the lachrymal sac. Among 180 cases treated by this not very strict antiseptic method, suppuration of the cornea commencing in the wound occurred six times. He then resolved to practise a stricter antisepsis, and adopted the following measures. The hands and face of the patient having been washed with soap on the evening previous to operation, carbolised compresses were applied up to the time of operation; the instruments were laid in 5 per cent. carbolic solution, and lightly dried only at the moment of their use. The whole operation was performed under the steam-spray. The eye was dressed with boracic lint, protective, and boracic cotton-wool. Subsequent dressings were always made under the spray, with disinfected hands, and with fresh materials, in the morning, before other patients had been dealt with. Among 25 cases thus rigorously treated, suppuration of the wound within twenty-four hours occurred twice. Dr. Just does not feel justified in drawing the conclusion that antiseptics are of no value in ophthalmic surgery, but points out that the methods employed by him are manifestly no safeguard against suppuration.

2. *Just on the Treatment of Hypopyon by Manipulation of the Eye.*—By means of gently stroking and rubbing the eyeball with the lower eyelid, Dr. Just has succeeded in distributing the purulent collection over the anterior chamber, and thus mixing it freely with the aqueous humour (*Centralb. für Praktische Augenheilk.*, June 1881). He has several times seen a hypopyon thus treated undergo exceptionally rapid reabsorption. A note is added by Dr. Hirschberg, to the effect that by causing the patient to lie on the right side and the left side alternately, changing the position from hour to hour, a similarly rapid reabsorption of a movable hypopyon may be induced.

3. *Chisholm on the Treatment of Iritis by Salicylate of Soda.*—Dr. Chisholm (Knapp and Hirschberg's *Archiv*, and *Centralb. für Prakt. Augenheilk.*, June 1881) has given large doses of this drug in cases of acute scleritis and iritis, including those of specific origin, in which the continued use of mercury and iodide of potassium had failed, with good results. Mydriatics were used at the same time. The salicylate was given in three-hourly doses, amounting to as much as 9 to 12 grammes (130 to 180 grains) in the twenty-four hours. The doses were reduced as the attack subsided. On account of the unpleasant effects of the medicine, its use was suspended when no decided benefit was manifest within two or three days.

4. *Königstein on the Examination of Eyes of Newborn Children.*—Königstein (*Wien. Med. Blätter*, Band iv, and *Centralb. für Prakt. Augenheilk.*, June 1881) says that among 281 eyes there was no instance of myopia. The iris was mostly grey, inclining towards blue or green. The difference between the arteries and veins of the fundus was less manifest than in the adult. Retinal hæmorrhages were very frequent, but soon disappeared.

5. *Fuchs on the Treatment of Gonorrhœal Conjunctivitis by Division of the External Commissure and Fixed Eversion of the Lower Lid.*—In a severe case of this disease, in which one eye was already lost through corneal suppuration, and the other was in a state of acute inflammation, with great chemosis and swelling of the lids, and turbidity of the cornea, Dr. Fuchs proceeded as follows (*Centralb. für die Prakt. Augenheilk.*, July 1881). The outer commissure was freely divided, so as to completely relax the eyelids; a loop of thread was passed through the lower eyelid, and brought out and fastened far down on the cheek by Gaillard's method, so as to cause complete ectropion of the lower lid; iced compresses and frequent cleansings were ordered. The cornea was perfectly clear on the fifth day; cure was effected; the incision through the commissure resulted in a fine linear cicatrix. In a second case, in which, likewise, turbidity of the cornea had already appeared, complete cure was effected by the same measures. By this proceeding, the author alleges that he obtains the advantages which Mr. Critchett has achieved by bisecting the upper eyelid, without the danger of subsequent deformity which he believes to attend the latter operation. The advantages gained are diminution of the pressure of the lids, increased ease of egress for the purulent secretion, ready access to the inner surface of the lids for cleansing purposes, and free escape of blood from the incised commissure.

6. *Samelsohn on the Ophthalmo-therapeutic Action of Nitrite of Amyl.*—As a supplement to three cases of affection of the optic nerve benefited by this drug, published by Deutschmann (Gräfe's *Archiv*, Band xxvii, Heft 1), Dr. Samelsohn records a similar experience in his own practice (*Centralb. für die Prakt. Augenk.*, July 1881.) Extreme amblyopia of the right eye occurred rather suddenly in a married woman, aged 36, simultaneously with the return of the menses, three months after a normal labour. Eight days after its onset, the amaurosis was found to be absolute; the pupil of the affected eye was devoid of reaction to light, though consensually active; the papilla was paler than in the healthy eye, but not atrophic or obscured at the margin; the large retinal vessels were decidedly smaller than in the fellow-eye. Six drops of amyl-nitrite on a cloth were given as an inhalation; hyperæmia of the

face occurred promptly, and simultaneously with it a manifest injection of the right papilla was observed by Dr. Samelsohn and verified by Professor Rothmund. A restoration of sensibility in a portion of the retina was discovered immediately afterwards. Further improvement was observed after subsequent inhalations. Ultimately, after treatment with strychnia injections, complete restoration of the visual acuity and field, and of the action of the pupil, was obtained.

7. *Schroeder on the Treatment of Eye-Diseases by Pilocarpin.*—The author reviews the facts which have been accumulated concerning the action of pilocarpin, and records his experience of its use in twenty-five cases treated in the St. Petersburg Eye Hospital (*St. Petersburg Med. Woch.*, No. 5, 1881). Introduced by the stomach or the skin, the drug causes a paralytic dilatation of the peripheral vessels, a slight rise of temperature in the axilla, a slight fall of blood-pressure, a slight acceleration (with larger doses a retardation) of the pulse, and a very profuse sweating and salivation. The sweating begins at the head, and spreads to the feet. In equal doses, the internal administration is ten times less powerful than the subcutaneous. By the latter method, a dose of 15 milligrammes (= about ¼ grain) causes a loss of fluid, salivary and cutaneous, of 500 grammes to 2 kilogrammes (= about 1 to 4 pounds) in the course of one to two hours. A brief mention is made of the results which have been obtained with pilocarpin in the treatment of dropsy from acute or chronic nephritis, and from cardiac disease, of pleurisy with effusion, emphysema, malaria, parotitis, rheumatic affections, syphilis, croup, and diphtheria. For the last-named disease, pilocarpin is stated by Guttmann to be a certain remedy, 81 cases having been rapidly cured by its means by him. Unpleasant and serious effects sometimes follow the use of the drug, viz., nausea, vomiting, gastralgia, diarrhœa with tenesmus, strangury, dizziness, and collapse. Schroeder believes they may be avoided by proceeding with due caution. For patients whose general health was fairly good, he began with 15 milligrammes of pilocarpin (= about ¼ grain) subcutaneously; for those whose strength was much reduced, with less. The injection was given in the evening, at least three hours after the last meal, and the patient was not permitted to leave his bed until the following morning, when, weather and the ocular disorder permitting, he was allowed to walk even out of doors; the injections were usually repeated daily. Among the 25 cases, no instance of collapse occurred; rigor once for ten minutes; slight nausea several times; vomiting only in one patient, who had taken food too recently, and not again when this had been avoided. Susceptibility to the drug differed in different individuals. A reduced susceptibility on repetition of the same dose ten days in succession was not observed; on the contrary, the later injections occasionally acted more powerfully. In syphilitic affections of the eye, it was used only when mercury and iodide of potassium had proved powerless; in one such case of syphilitic iritis, pilocarpin proved equally powerless; in two such cases of obstinate choroido-retinitis, a marked but only temporary increase of visual acuity occurred. Uræmic amaurosis, which is, however, a cerebral and not an ocular malady, has been known to be removed by two pilocarpin injections. In four cases of retinitis albuminurica, a very striking and, to a certain extent, permanent improvement in sight was gained by about twelve injections, probably through removal of the infiltration of the optic nerve and retina. In rheumatic eye-disorders it had not yet been used. In several cases of vitreous opacity from irido-cyclitis and irido-choroiditis, much improvement was gained. In cases of detachment of retina, some reabsorption of vitreous turbidity and improvement of sight was observed in six cases, but a reposition of the detached retina only in one. A case of long standing parenchymatous keratitis (hereditary syphilis) improved much after seven injections during ten days. In one case of neuro-retinitis of unknown origin, after perchloride of mercury had been used for fourteen days with little result, the retinitis disappeared entirely in three weeks, with great improvement in vision. In another instance, due probably to cerebral tumour, no benefit was gained. [For a previous record of cases of eye disease treated by jaborandi and pilocarpin, see an article by Landesberg in the *Archives of Ophthal.*, vol. viii, p. 125.—*Rep.*]

8. *De Wecker on Nerve-Stretching applied to Ophthalmic Surgery.*—The author (*Klin. Monatsb. für Augenheilk.*, June 1881) hopes that the process of nerve-stretching, introduced into general surgery with such astonishingly good results by Professor Nussbaum, may be turned to account also in ophthalmic surgery. Having studied the relations of the optic nerve in the dead subject with regard to the mode in which it may most readily be stretched, he operated on the living as follows. The lids being widely separated, the conjunctiva is divided to an extent of two centimètres in a tangent to the inner corneal margin; the subconjunctival tissue is freely separated; the tendon of the internal rectus is taken up on a hook, carefully divided, and secured by means of a suture passed through it. Tenon's capsule is separated from the globe by means of a blunt spatula as far back as the insertion of the optic nerve; then, while the cornea is rotated outwards by means of fixation forceps, the optic nerve is secured by a strong strabismus-hook, and forcibly pulled forwards towards the front of the orbit. The traction must be tolerably energetic, and must enable the operator to reach the insertion of the nerve with his finger. The hook is then withdrawn, the divided tendon is secured to the conjunctiva by the suture already introduced, and an antiseptic dressing applied. The operation has been performed as yet only on blind eyes, the object being to ascertain its influence on the nerve-centres, and the extent to which 'hallucinations, pain, and so forth', can be lessened by it. The results are to be communicated later. PRIESTLEY SMITH.

9. *Emrys-Jones on the Treatment of Ophthalmia Neonatorum.*—Dr. Emrys-Jones (*Brit. Med. Jour.*, March 1881) gives the details of 420 cases presented for treatment at the Royal Eye Hospital, a large proportion of which had been under previous treatment. In 72, or nearly 18 per cent., the cornea was affected; in 38, both corneæ were affected; in 34, one cornea was affected; in 16, both eyes were lost; in 21, one eye was lost; making a total of 53 eyes lost, or nearly 6¼ per cent. In 26 cases there were ulcers of the cornea; in 14 cases there was perforation, 6 with prolapse of the iris; in 16, there were large opacities; in 5, there were ulcers with lead deposits; in 4, there were ulcers with deposits of nitrate of silver. Dr. Emrys-Jones states that he had never seen a single case of uncomplicated ophthalmia neonatorum lost, where proper treatment was adopted early. He further points out that, after inquiry into the cause of blindness, in 72 cases examined for admission to Henshaw's Blind Asylum

24 of them were found to be due to this disease in infancy, and that 75 per cent. of all the blindness in this large asylum were due to preventable causes. After referring to Dr. de Wecker's method of treatment with 2 per cent. solution of carbolic acid, he details the method he found most efficacious, viz., brushing the palpebral conjunctiva over with weak solutions of nitrate of silver, grains 10, 15, or 20, to the ounce of water, by means of a camel's hair brush, and washing off the superabundant nitrate with a solution of salt and water.

10. *Rählmann on Amyloid Degeneration of the Conjunctiva.*—Rählmann (*Archiv für Augenheilk.*, Band x) says that the special amyloid formation in the conjunctiva is always preceded by a stage of hyaline degeneration. Amyloid formation in tumours is always accidental. It occurs only in an advanced stage of the formation of the tumours, and is then mostly secondary. It has no connection with the formation of trachoma in the conjunctiva. The tumours may be completely checked by a partial extirpation.

11. *Pagenstecher on the Extraction of Cataracts in Closed Capsule, with a Report of 117 Additional Cases.*—H. Pagenstecher (*Arch. für Augenheilk.*, Band x) performed extraction of cataracts in closed capsule after the method of A. Pagenstecher, in cataracts following irido-choroiditis, in over-ripe cataracts, and in Morgagnian cataracts. One hundred and seventeen cases in which this operation was performed are added to his report published in 1875; so that the total is now 353. Out of the 117 cases, the capsule burst four times; of the rest, 91 cases were not complicated, but 22 were considerably so. In the uncomplicated cases, full and more than full acuity of vision was obtained. Among these, there were 16 cases in which, during the operation, a loss of the vitreous humour occurred. In 37 cases only half the acuity of vision was restored; twenty times vision was equal to one-tenth; twice to one-twentieth; and once the number of fingers could be distinguished at the distance of four feet. In 4 cases sight was lost.

12. *Bull on Lacrymal Conjunctivitis.*—Dr. Bull (*Trans. of Med. Society of New York*, 1881) adopts the following method of operating on the lower canaliculus. The lid is drawn downward and outward as fully as possible, the probe-point of the knife is introduced perpendicularly into the punctum, with the cutting edge of the knife turned towards the ball; when the knife takes the horizontal position, the edge is turned still more towards the inferior *cul-de-sac*, and in this position is pushed along the canal as far as desired, and is made to cut out by moving the handle in an inward slightly upward direction. The result is a curved incision, the convexity of which is directed backward. The advantages of the method are that the tears are well carried off, the wound is hidden behind the margin of the lid, it serves well for probing, and has, perhaps in consequence of the free movement of one lip upon the other, less tendency to unite than the ordinary incision made with the 'sharp edge of the knife upwards'.

13. *Tartuferi on the Cell-Forms composing the Epithelium of the Tarsal Conjunctiva.*—The *Giornale Internazionale delle Scienze Mediche*, Fasc. 9, contains a carefully written article on this subject by Dr. Tartuferi. The author examined specimens of the conjunctiva from thirty individuals of all ages, and at periods varying from three hours to as many days after death. He arrives at the conclusion, that the conjunctival epithelium consists essentially of three layers of prism-shaped cells with interspaces. The most superficial layer of the three is composed of prismatic cells, having oval or rounded and granular nuclei, varying in size from six to ten micromillimètres. This granular appearance he considers due to the reagents employed. The middle layer may be at times wholly absent. When present, it consists of fusiform, pyramidal, or polyhedral cells, with nuclei of from eight to fourteen micromillimètres in diameter. This middle layer the author has found to be best marked in very early life, when the cells are generally fusiform. The third, or deep layer, is composed of cells with round or oval nuclei, almost entirely destitute of protoplasm, and measuring from six to thirteen micromillimètres in diameter. These deeper cells the author considers represent the least mature form of the cell-element, as is proved by the large size of the nuclei, and the scantiness of the cellular substance. The cells in the middle layer are the links which connect the earliest and latest stages of epithelial evolution. In the superficial cells, perfect morphological differentiation is seen to terminate in involutionary change. The author believes that the great discrepancy in the views of various observers, as to the type of the epithelial cells of the conjunctiva, is best accounted for by supposing that their researches have been confined exclusively to the deep layer. The following is the method of preparing the conjunctiva for examination which the author recommends. The eyelids must be removed as soon after death as possible, and immersed in a solution (2 to 8 per cent.) of bichromate of potash. In this they may be allowed to remain during a period of from six days to four months. They should next be placed in a solution, either of gum arabic, or of gum tragacanth and glycerine in equal proportions. Very thin sections are then prepared, and immersed in a solution of sodic chloride, and finally transferred to a very dilute one of osmic acid, 1 in 5,000, 1 in 21,000, or 1 in 16,000. Specimens so prepared are best examined in glycerine. LITTON FORBES.

14. *Klem on a Pulsating Orbital Tumour.*—In the *Norsk Magazin for Lägevidensk.*, series 3, Band ix (abstract in *Nord. Medicin. Arkiv*, Band xiii), Dr. E. Klem describes a case of pulsating orbital tumour in a sailor, aged 25, produced by a kick under the upper border of the orbit eight months before he came under treatment. The skin over the left eye, in the frontal and temporal regions, was swollen; and both eyelids were blue. The eyeball was dislocated downwards, being turned somewhat inwards; its movements were limited. The optic media were clear. The papilla was pale, and presented minute arteries. There was no perception of light. When the eyelid was pressed, a pulsation synchronous with the heart-beat was seen and felt. It was strongest at the upper and inner part, where a sharply defined elastic swelling, as large as a hazel-nut, was felt and seen. There was a loud murmur, synchronous with the pulse. In other respects, the patient's health was good. He was put to bed, and, during five days, digital compression was applied, for thirty-five hours and a half in all, to the common carotid artery; this caused cessation of the murmur and pulsation. Five weeks later, the pain in the face, which the patient had felt, had almost disappeared, the protrusion was much diminished, the movements of the eye were free, and the tumour had diminished in size.

15. *Asplund on Meningitis after Enucleation of the Eyeball.*—Dr. M. Asplund relates in *Hygiea* for 1880 (*Nord. Medicin. Arkiv*, Band xiii) the case of a man, aged 28, who, three and a half months before his admission into the hospital at Göteborg, had been struck on the right eye by a splinter of a percussion-cap, which had been followed by pain and atrophy of the organ. When the eye was removed—which was done as a prophylactic measure, no sympathetic affection of the other eye having yet appeared—the splinter was found embedded in exudation behind the lens. No antiseptic precautions were employed during the operation. On the following day, the patient had severe headache and vomiting. These continued and increased; delirium set in, and he died nine days after the operation. The necropsy revealed purulent meningitis, mostly on the right side, where the whole base of the brain was implicated; there were small abscesses in the Sylvian fossa, and a thrombus in the right cavernous sinus. The optic nerve was unaltered; the divided part had nearly healed; there was no trace of suppuration.

16. *Agnew on Incision of the Lachrymal Sac.*—Dr. C. R. Agnew of New York says (*Detroit Lancet*): The anatomy of the parts is about as follows. We have the eyelids covering the eyeballs, and towards their inner angle we have the puncta. Now, behind this angle, which is called the internal canthus, is the little gland called the caruncle, and, just in the crease between the caruncle and the angle of the eyelids, there is nothing between the external world and the cavity of the sac but conjunctiva and sac-wall. As the sac fills up with matter, its anterior wall is brought forward, the tendon of Horner's muscle is more or less stretched, and the sac bulges below and above it and is made prominent. Now, standing behind a patient who has such a lachrymal abscess, which you are not able to enter through the punctum, you may take Beer's knife, and, holding the head firmly, poise the blade of the instrument flatwise, so as almost to be in contact with the cornea, pass it behind the internal canthus behind the angle where the lids come together, carrying the point inwards, and enter the sac, reaching it by making a slight wound. This wound usually heals rapidly, does not interfere with the canaliculi, and, if it become fistulous, does no possible harm, because it is inside of the lids, and the sac empties itself inside, instead of outside upon the cheek. The sac having been emptied, it may be treated according to the indications.

17. *Fernandez on Amaurosis from Lesions of the Orbital Region.*—Dr. J. S. Fernandez, in a concise paper in the *Amer. Jour. of the Med. Sciences*, draws the following conclusions. 1. Amaurosis following wounds of the eyebrow is generally the result of cerebral lesion, as proved by the fact that the greater number of cases lose consciousness or die soon after the accident. 2. Although modern ophthalmological literature does not contain a single instance followed up from beginning to end by ophthalmoscopical examinations, two of my cases and Galezowski's observations go to show that amaurosis is due to atrophy of the papilla, and this to cerebral lesion of more or less severity, or to injury of the optic nerve in its passage through the optic foramen. 3. Those cases where the amaurosis is attributed to sympathetic action or excitability of the fifth pair of nerves, from whatever cause, occurred previously to the employment of the ophthalmoscope, and were open to erroneous interpretations. 4. The amaurosis occasioned by simple irritation of the supra-orbital nerve, from puncture, cicatricial distension, or any other cause, might at the present time be doubted, in the absence of a complete clinical record to support it; but inasmuch as sympathetic amaurosis from excitability of the maxillary branch of the fifth has been observed, the possibility of a similar result as regards the supra-orbital, one of the three principal branches of the trigeminus, cannot consistently be denied. 5. The entire identity between amaurosis from irritation of the superior maxillary and supra-orbital nerves once conceded, the prognosis must be considered equally favourable in either case; for amaurosis from wounds of the eyebrow, resulting in atrophy of the papilla, is incurable. 6. The experiments on dogs, inflicting divers traumatic lesions on the supra-orbital region, have not been followed by amaurosis. A. Henry, M.D.

PHYSIOLOGY.

RECENT PAPERS.

1. Mason, W. P. — Hourly Variations of Urine. (*New York Med. Record*, 1881, p. 617.)

2. Guder.—The Action of Quinine on the Healthy Human Ear. (*Diss.*, Berlin, 1880.)

3. Meklard.—The Action of Hydrate of Chloral on the Excretion of Sugar by the Urine. (*Archiv für Exper. Path.*, Band xii; *Paris Méd.*)

4. Horvath.—The Respiration of Hybernating Animals in Relation to Animal Warmth. (*Verhandl. des Phys.-Med. Gesell. in Würzburg*, Band xiv, Heft 1 and 2.)

5. Born.—On Experiments as to the Development of the Sexual Differences. (*Breslauer Aerztl. Zeitsch.*, 1881.)

6. Mosso.—Experiments on the Circulation in the Human Brain. (*Centralbl. für Nervenheilk.*)

7. Renzi.—Physiological Fine Crepitation. (Virchow's *Archiv*, Band lxxiii.)

1. *Mason on the Hourly Variations in Urine.*—Dr. William Pitt Mason (*New York Med. Record*, 1881, p. 617) has made some valuable observations on the hourly variations of the acidity, specific gravity, amount, and urea in the urine of a healthy man. Breakfast was at 8 A.M.; dinner at 1 P.M.; supper at 6 P.M. The examinations were made in cold weather. No great amount of out-door exercise was taken, but the subject was on his feet, engaged in active laboratory work, all day. The results are represented by the author in charts, but may be summarised. The curve of acidity rose slightly after breakfast, and fell at noon, then rose steadily to its maximum; at 3 P.M. it fell very low again; at 6 P.M., another rapid rise occurred, nearly equalling the last, reaching its maximum at 8 P.M., after which there was a steady fall to 11 P.M. The specific gravity varied less, falling, however, after breakfast, rising slightly after dinner, maintaining that rise towards night, with the exception of a drop from 7 to 8 P.M. The amount of urine reached its maximum at 3 P.M., rising to and falling after that time. The urea showed a rise about two hours after each meal, the maximum being at 3 P.M.

Robert Saundby, M.D.

2. *Guder on the Action of Quinine on the Healthy Human Ear.*—P. Guder (Dissertation, Berlin, 1880) gives the results of experiments upon the action of quinine. One gramme of muriate of quinine reduces the temperature of the ear 0.56 deg. Cent. (about 1 deg. Fahr.) within from two to two and a quarter

into male or female inherent either in the egg, in the spermatozoa, or in the mode of impregnation.

6. *Mosso on Experiments on the Circulation in the Human Brain.*—The subjects of these experiments (*Centralb. für Nervenheilk.*, etc.) were three: 1. A woman in whom, from syphilitic disease, almost the whole of both parietal bones were necrosed; 2. A boy in whom a severe wound in the temporo-parietal region had left a defect in the skull two inches in diameter; 3. A case in which a blow on the forehead caused a fracture, leaving a defect one inch in diameter. The cerebral movements could very easily be taken in these persons with simple apparatus, and usually the pulse-movements of the forearm were taken at the same time with the hydrosphygmograph. During any mental action, such as multiplication, or excitement, as in repelling an accusation, the height of the cerebral pulsations was very markedly increased. To exclude the fallacy of this increase being possibly due to alteration of the respiratory movements, from the attention being bent on the experiment, the respiratory movements were taken at the same time. It was found that very frequently an increase of the cranial pressure took place with no alteration of the respiration. The respiration ought also to affect the circulation in the forearm as well, but generally the increase of cranial pressure was accompanied by a decrease in the arm volume. At the moment of awakening from sleep, there is a decrease of the intracranial pressure, so that the amount of blood then in the brain is less than during sleep, and thus the brain can scarcely be said to be in an anæmic condition during sleep. In sleep, even a slight call or any other stimulus, without wakening the person observed, will raise the intracranial pressure. Normally, there is no alteration in the amount of blood contained in the cranium. During diastole more blood enters the arteries, and thus the intracranial pressure rises, but at the same time the veins are compressed and emptied, so that from the sinuses a pulse-curve similar to that of the arteries is obtained. Normally, there is no interchange of the cerebro-spinal fluid in the cranial cavity and the spinal canal, although no doubt the pressure of that fluid sinks in inspiration and rises in expiration.

7. *Renzi on the Physiological Fine Crepitation.*—Professor Renzi has for several years been in the habit of describing this crepitation in his lectures. He first observed it in a robust individual who wished to insure his life. Hearing this fine crepitation above the clavicle, Professor Renzi deferred his opinion until he should have made a second examination. He found no change, however, and two years thereafter the person was still in rude health. He points out various characteristics of the crepitation (Virchow's *Archiv*, Band lxxxiii, Heft 3, 1881). 1. It is an unfrequent phenomenon, often not occurring once in a hundred cases. 2. It is not voluntary; it does not exist in ordinary normal respiration, but only during the first few inspirations. 3. It is most distinct at first, not to be distinguished from the fine crepitation of acute pneumonia, but it disappears very quickly, and is not audible with the later inspirations. 4. The most common site is the hollow above the clavicle. Professor Renzi has never heard it posteriorly. He attributes it to a slight degree of atelectasis in that part of the lung. As is the case with the fine crepitation of pneumonia, it is heard only during inspiration, like the rubbing of a lock of hair between the fingers close to the ear. It is, however, not heard where the pathological fine crepitation occurs; it gradually diminishes with deep respirations till it disappears; and, lastly, it is accompanied by none of the other symptoms of pneumonia.

JAMES ANDERSON, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. BREISKY.—On Intra-uterine Local Treatment of Puerperal Fever. (*Zeits. für Heilkunde*, 1880, 3 and 4 Haft.)

2. COHNSTEIN.—On Temporary Dilatation of the Vaginal *Cul de-sac*. (*Archiv für Gynäk.*, Band xvii, Heft 3, p. 504.)

3. DORAN, ALBAN.—Hydroperitoneum resulting from Oöphoritis. (*Brit. Med. Jour.*, Oct. 29, 1881.)

4. ERICH, A. F.—The Differential Diagnosis of Abdominal Tumours.

5. GOTH, E.—Pigment Sarcoma of the External Female Genital Organs. (*Centralb. für Gynäk.*, 1 Oktober 1881.)

6. LAHS.—On Axis Traction-Forceps. (*Ibid.*)

7. MANGIAGALLI.—Five Years' Report of the Obstetric Clinic of Milan. (*Annali di Ostet., Ginecol., e Pediat.*, Settembre 1881.)

8. MARCHIONNESCHI, O.—Pregnancy and Parturition in Rickety Pelves. (*Ibid.*)

9. MARTIN, A.—Contribution to Emmet's Operation for Lacerated Cervix. (*Wiener Med. Woch.*, 6 August 1881.)

10. MUNDÉ, PAUL.—The Curability of Uterine Displacements. (*Amer. Jour. of Obstet.*, October 1881.)

11. OPIE, THOMAS.—Twenty-seven Cases in which the Intra-uterine Douche was used. (*Maryland Med. Jour.*, 1881.)

12. POULLET.—Fœtal Hydrocephalus in Relation to Pregnancy and Parturition. (*These*, Paris, 1880.)

13. PUECH, ALBERT.—Purpura Hæmorrhagica in Relation to Menstruation and Pregnancy. (*Annales de Gynécol.*, Octobre 1881.)

14. STOCKER, S.—Thrombus Vaginæ. (*Korrespondenzblatt für Schweizer Aerzte*, No. 13, 1881.

15. WELLS, SPENCER.—Porro's Operation. (*Brit. Med. Jour.*, Oct. 29, 1881.)

16. WITZEL.—First Report of Dr. Gusserow's Polyclinic at the Royal Charity Hospital, Berlin. (*Berliner Klin. Woch.*, Nos. 28 and 29, 1881.)

3. *Doran on Hydroperitoneum from Oöphoritis.*—E. M. single, aged 23, was admitted into the Samaritan Hospital with ascites. She was tapped, and four and a half gallons of fluid were removed. A week later, the abdomen again enlarged. As the cause of the reappearance of the ascites was obscure, Dr. Bantock made an exploratory incision, when he found all the abdominal viscera healthy except the ovaries, which presented an irregular, hard, and warty appearance. The ovaries were therefore removed. Menstruation had commenced at fifteen, and continued with regularity for two years, when it ceased, and had not recurred during six years. This led to a suspicion of ovarian disease as a cause of the ascites. The ascites has not returned since the operation of oöphorectomy. Mr. Doran found that the right ovary measured one inch and five-eighths; the left, one inch and three quarters. In both, the external and internal appearances were similar. The tunica albuginea was pinkish. On section, the whole of the central portion of the stroma was found to have broken down, apparently by mucoid degeneration, leaving a cavity, in which, in the right

hours. It lessens the capability of hearing a watch, or even ordinary conversation, within the same time. The author did not observe hyperæmia of the exterior auditory canal, nor of the membrani tympani, as described by Roosa. On the contrary, he saw, while the action of quinine was at its height, a decrease in colour of the parts which had been red before. The temperature of the body falls in proportion to the temperature of the external auditory canal, 0.5 deg. Cent. (0.9 Fahr.) within an average of two and a half hours. There is no change of the pulse. Subjective sensations of hearing, disturbances of equilibrium, occurred in most cases after from one and a quarter to one and a half hours.

3. *Meklard on the Action of Hydrate of Chloral in the Excretion of Sugar by the Urine.*—F. Meklard agrees with the opinion of Mering and Musculus, that in animals under the influence of chloral the urine never contains sugar (*Archiv für Exper. Path.*, Band xii, and *Paris Méd.*) He injected under the skin of a dog a certain quantity of hydrate of chloral, and then made a puncture in the fourth ventricle. The urine examined never contained sugar. In another animal he first made the puncture; there was then glycosuria; he then injected chloral, and the sugar disappeared. If the vagus were divided at the level of the neck, and the central end were excited, reflex glycosuria was produced; but this latter phenomenon did not show itself in chloralised dogs. In the same way, the urine did not contain sugar in a dog which had breathed carbonic oxide, but which had first absorbed five grammes of chloral. This manifest action of chloral on the excretion of sugar has been similarly applied to the human subject. In a diabetic patient who was placed under its influence, a diminution in the quantity of the urine, and of the sugar contained in it, was noted. In a second patient, it was simply observed that the quantity of urine had greatly diminished.

4. *Horvath on the Respiration of Hybernating Animals in relation to Animal Warmth.*—Observations have shown that the temperature of marmots, on awakening from their winter sleep, rises within half an hour from 62 deg. Fahr. to 89 deg. Fahr., notwithstanding that the surrounding atmosphere has a temperature not higher than 50 deg. Fahr. Also, it was observed that the number of respirations of the awakening animal was fewer than when it was quite awake, a fact which would seem to imply that the chemical metamorphosis of carbon and oxygen is not the cause of this rapid rise of temperature. Again, it could not be attributed to the heat consequent on muscular waste, for the movements at this time are extremely weak. The probability, therefore, seemed to arise that there is another source of animal warmth unknown to us, and this a source of very considerable power. The question which Dr. Horvath has set before himself is, Are the products of combustion during this great rise of temperature sufficient to account for it? (*Verhandl. der Physik.-Med. Gesellsch. in Würzburg*, Band xiv, Heft 1 and 2). To settle this question, he obtained a large supply of hybernating animals for observation and experiment. The two species mainly used were *Spermophilus guttatus* and *Myoxus dryas*, and in both the above rapid rise of temperature was verified both as to amount and to rapidity. Then came the analysis of the air breathed by these animals. For certain reasons, Dr. Horvath could not carry this out with Regnault's respiration apparatus as it ought to have been. The animals were kept for a certain length of time under a hermetically closed glass-shade of known dimensions, and the amount of change produced in the air during this space of time was calculated by transferring a portion of it to a eudiometer. The animals were in various conditions, asleep, awake, or awakening, and their temperatures were measured in the rectum with the same thermometer passed to the same depth. As the observations were made mainly in relation to the rise of temperature, the excretion of carbonic acid and consumption of oxygen were the points mainly observed. Every precaution was taken in weighing the animals, measuring the three glass shades used, mixing the air in the shades with a magnetic feather, etc.; and Dr. Horvath records 135 most carefully performed experiments. As he considers his experiments still incomplete, he draws no conclusions from them, but promises further communications on the subject. We may quote the following as examples of the experiments. 1. A wake marmot (168 grammes weight) was kept two hours in a glass-shade (6,829 cubic centimètres of contents), after which the air contained in the shade had, at 51.8 deg. Fahr., and with the barometer at 30 inches, 9.99 per cent. of carbonic acid and 8.06 of oxygen. 2. A sleeping, *i.e.*, a hybernating marmot (162½ grammes in weight) was kept for 24 hours in a glass-shade (3,533 cubic centimètres), at a temperature of 42.8 deg. Fahr. During this time the animal breathed 3 to 4 times per minute, and showed at the end a rectal temperature of 42.8 deg. Fahr., the same as the surrounding atmosphere. The air in the shade contained 1.53 per cent. of carbonic acid, and 16.38 per cent. of oxygen. 3. A wakening marmot (156 grammes in weight) was kept an hour in a glass-shade (3,533 cubic centimètres). The surrounding temperature was 51.8 deg. Fahr., the rectal temperature at the beginning 60.8 deg. Fahr., at the end, 87.8 deg. Fahr. The air in the shade contained 11.45 per cent. of carbonic acid and 6.48 of oxygen. When a large glass-shade is used, the liability to error from multiplication of a small mistake is considerable; while, again, if a small shade be used, it may readily be said that the animal suffers from carbonic acid poisoning. Hence Dr. Horvath used several different shades, and modified also the other experimental conditions.

5. *Born on Experiments as to the Development of Sexual Differences.*—These experiments (*Breslauer Arztl. Zeitschrift*, 1881) were performed on frogs, for the reason that artificial impregnation by the method long since described by Spallanzani can be readily employed with them, also because their young are easily reared. The impregnated eggs were kept in different aquaria, provided with fresh water and with either vegetable or animal food. In neither case, however, was the food what Leydig considers the suitable food for tadpoles, namely, slime containing organic particles. So soon as the sex could be distinguished by the microscope, the tadpoles were killed and examined. Of 1,272 such, 95 per cent. were female; while, in a large number of frogs caught and examined, the numbers of male and female were very nearly equal. The author attributes this great difference to the unsuitable food provided. He seems entirely to overlook the artificial impregnation, one part of which consisted in making certain that an overplus of spermatozoa penetrated the gelatinous covering. Until it can be shown that unsuitable food will produce a similar result with eggs naturally impregnated, it cannot be said that the theory has been upset of a potency to develop

ovary, about a dozen Graafian follicles projected like a row of pearls. They were readily detached from the very soft stroma around their outer part, and all that were opened contained perfect ova, with the germinal spot and vesicle well-marked. In the left ovary there were very few such follicles; the central softening was less marked. In both, the stroma immediately under the albuginea was unusually tough.

4. *Erich on Differential Diagnosis of Abdominal Tumours.*—Dr. Erich relates some cases illustrating the value of aspiration before concluding the diagnosis in abdominal tumours. He thinks it advisable to use the aspirator in all cases of doubtful abdominal tumour before pronouncing definitely upon its nature.

10. *Mundé on the Curability of Uterine Displacements.*—The author is of opinion that recent displacements of any variety are the only cases which offer a fair chance of recovery by any of the mechanical means at our disposal. Of these means, pessaries are the most convenient for temporary relief, but only in a comparatively small number of cases does permanent cure result. The best curative means of support of the displaced uterus is probably the systematic and intelligent use of vaginal tampons, impregnated with a mild astringent solution. Posture, while excellent as a means of relaxing the uterine supports and relieving pelvic congestion, is by its inconvenience, at best a temporary relief. Permanent relief—cure—can be expected and will be obtained only when the displacement is of recent origin, especially when it has been produced by some sudden physical shock; or when the complete tissue metamorphosis accompanying puerperal involution aids in restoring the uterine supports and the uterus itself to their original and healthy tone. This fortunate occurrence must be looked upon as decidedly the exception; since the favouring circumstances above mentioned are but rarely met with, or the displacement is seldom recognised at a sufficiently early date to permit of a perfect restoration to health. The most favourable period, therefore, for the treatment of a uterine displacement or distortion, with the view to a permanent cure, is within one or two weeks after delivery, before the woman has left her bed. The protracted wearing of astringent vaginal tampons, introduced daily, offers for some cases of ante- and retro- displacement, an excellent, and for most cases of procidentia, almost the only efficient and safe remedy for the displacement, far superior to all steadily worn hard or soft pessaries. A procidentia of uterus or vagina may even be cured by several months of this treatment, if the affection be not of too long standing. While permanent cure is only occasionally met with, so much relief is afforded by pessaries and the other mechanical supports and methods above discussed that they should in no case be discarded unless all treatment be counterindicated. For prolapsus uteri et vaginæ, unless of quite recent origin, an operative constriction of the vaginal canal and a restoration of the relaxed or destroyed perineum to its normal state is the only sure means of cure, and even for this affection the unfailing method remains still to be discovered. The cure of a flexion by operative treatment is impossible; the canal may be made comparatively straight by a division of one or the other or both lips of the cervix, but the flexed shape of the organ still remains. Only by gradually increasing elevation of the fundus by a vaginal pessary, after delivery, or by the protracted wearing of an intra-uterine stem, can in a small proportion of cases a permanent cure be effected.

13. *Puech on the relation of Purpura Hæmorrhagica to Menstruation and Pregnancy.*—Dr. Puech relates several cases, and draws the following conclusions. 1. Purpura hæmorrhagica occurs more frequently in women than in men. 2. It has a definite action on the uterus, whether gravid or not. 3. Its effects upon the non-pregnant uterus are three: *a*, it may cause the suppression of menstruation and supplant it by the periodical return of its manifestations; *b*, it may give rise to menorrhagia; *c*, it may produce metrorrhagia. 4. In pregnancy, purpura has a tendency towards producing abortion or premature labour. 5. The prognosis should always be extremely reserved. In general, purpura is more dangerous in women than in men, and during pregnancy the disease is more dangerous than in the non-pregnant state. 6. Metrorrhagia is more unfavourable in prognosis than menorrhagia.

14. *Stocker on Thrombus Vaginæ.*—The patient, a multipara, had a natural labour. Immediately after the delivery of the placenta, a tumour of the size of a fœtal head, smooth and painless, was felt proceeding from the right side of the anterior vaginal wall and extending down into the cellular tissue of the right labium majus. There were no varices. Expectant treatment was adopted. On the fourth day the tumour burst while the patient was sitting up in bed to have some carbolised oil applied between the labia. Recovery was rapid.

15. *Wells on Porro's Operation.* — On Friday, Oct. 21st, Mr. Spencer Wells performed Porro's operation on a patient aged 37, between five and six months advanced in pregnancy, and suffering from epithelioma of the cervix uteri. This is the first time the operation has been performed in England and the first instance in which the operation has been performed on account of malignant disease of the uterus. As in this instance there was malignant disease of the cervix, Mr. Wells added the operation of Freund and removed the entire uterus, dissecting it off from the posterior wall of the bladder. During the dissection of the cervix from the bladder, a small rent was made into the uterine cavity; the liquor amnii escaped, and the fœtus, which measured 10¾ inches, and weighed 14 ounces, was extracted, and the umbilical cord divided, the placenta being left in the uterus. The fœtus only made three or four respiratory efforts. The opening from the peritoneal cavity into the vagina was closed with silk sutures. When last heard of on Thursday, Oct. 27th, the patient was progressing favourably. FANCOURT BARNES, M.D.

TOXICOLOGY AND FORENSIC MEDICINE.

RECENT PAPERS.

1. HURPY.—Death from Hanging. (*Ann. d'Hygiène*, October 1881.)

2. GALIPPE.—Supposed Poisoning by Copper. (*Gaz. des Hôpt.*, 1881, p. 796.)

3. BAUER.—On Duboisine. (*Schmidt's Jahr.*, Band 189.)

4. BROUARDEL and L'HÔTE.—Poisoning by Potassium Chlorate. (*Ann. d'Hygiène*, 1881, p. 232.)

5. WALL.—On Snake-Poisons. (*Proc. Royal Society*, vol. xxxii, p. 333.)

6. Sacerdo Filho —Rattlesnake Poison. (*Archiv. do Museu Nacional do Rio de Janeiro: Nature*, Oct. 20.)

7. Biefel and Poleck.—Poisoning by Choke-Damp and Coal-Gas. (*Jour. of Chem. Soc.*, 1881, p. 853.)

8. Ossikowski.—Sulphide of Arsenic. (*Jour. pour Chem.*, vol. xxii, p. 323; *Jour. of Chem. Soc.*, 1881, p. 123.)

9. Selmi. — Arsenic in the Urine after Poisoning. (*Jour. of Chem. Soc.*, 1881, p. 311.)

10. Ludwig.— The Localisation of Arsenic. (*Med. Jahr*, 1880; *Zeit. für Anal. Chem.*, 1881, p. 608.)

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1. *Hurpy on Death from Hanging.*—Hurpy gives (*Ann. d'Hygiène*, Oct. 1881, p. 359) an interesting description of the position of the body of an old woman who died indubitably from hanging, which was no doubt suicidal. The body lay prone on the floor, a cord with a running noose passing round the neck, and being attached to the leg of a low table, at the height of 16 inches from the floor. The cord formed the hypothenuse, and the leg of the table and the floor the two equal sides of a right angle triangle, the sides of which measured respectively 16, 12, and 16½ inches approximately. It is remarkable that the deceased should have been able to exert sufficient tension upon the cord to effect self-destruction.

2. *Galippe on Supposed Poisoning by Copper.*—M. Galippe (*Gaz. des Hôp.*, 1881, p. 796) criticises some supposed cases of poisoning by Saint-Honoré cream, a Parisian delicacy prepared by whipping up eggs in a copper vessel, sometimes with the addition of a little alum. The toxic symptoms were attributed to the contamination of the cream with copper, in consequence of the use of a vessel made of that metal. M. Galippe, whose views as to the innocuity of copper are well-known, ridicules the notion that the symptoms exhibited by the patients were due to the ingestion of copper, and attributes them with, as he thinks, greater probability, to ptomaines. Indeed, M. Galippe seems inclined to think that most cases of supposed copper poisoning are really cases of poisoning by ptomaines. No analysis of the cream appears to have been made in the above cases; so that the respective views entertained by M. Galippe and his opponents, with reference to these particular cases of poisoning, can neither be established nor refuted.

3. *Bauer on Duboisine.*—Dr. Bauer (*Schmidt's Jahr.*, Band 189) has noted the physiological and toxic effects of duboisine upon himself. His observations confirm the statement of Ladenberg that duboisine is analogous to, if not identical with, hyoscyamine. Physiologically, Bauer finds their actions to be identical.

4. *Brouardel and L'Hôte on Poisoning by Potassium Chlorate.* — Brouardel and L'Hôte (*Ann. d'Hyg.*, 1881, tome ii, p. 232) detail five interesting cases of deaths in children through the administration of excessive doses of this salt. About a drachm appears to be a fatal dose for an infant two or three years of age. The absolutely fatal dose depends very much, however, on the mode in which the salt is administered. The symptoms manifested were, cutaneous affections—violet blue patches on the surface of the body—a form of cyanosis; gastro-intestinal troubles—not always manifested, however—such as diarrhœa, and vomiting of greenish matter; diminution and even suppression of the urine, and nervous affections, such as collapse and coma.

5. *Wall on Snake-Poisons.* — Hitherto no clear distinction has been recognised to exist between the actions of the poisons of the various species of venomous reptiles. Dr. Wall (*Proc. Roy. Soc.*, vol. xxxii, p. 333) has recently investigated the symptoms produced by these poisons in order to detect possible differences, and to see if the poisonous agents can be classified according to their physiological effects. As poisonous snakes may be simply classified into colubrine and viperine, one member of each class was taken for experiment—the cobra (naja tripudians) as the best known of the colubrine, and daboia or Russell's viper (daboia Russellii) as the best known, and an extremely deadly member of the Indian viperine family. His conclusions are as follows. The regular course of the symptoms of cobra poisoning is slowly advancing paralysis, coming on after a well-marked interval without symptoms, with special paralysis of the lips, tongue, larynx, and pharynx, and complete destruction of the respiratory function. Death is often attended by convulsions, which depend on asphyxia. Cobra poisoning very quickly destroys respiration; after slight acceleration the respiration becomes slower, and the excursus is lessened. The effects of cobra poison on the pupil is so small as to be a matter of doubt. Salivation is a constant symptom. The effect on the blood is not great, sanious discharges are rare, albuminuria has not been observed, and should the patient not die from paralysis, recovery is perfect and complete, no symptom being left in a few hours. Daboia poison commences its action by inducing violent general convulsions, which are often at once fatal, or may be followed immediately by paralysis and death, or may also be for a short time recovered from, paralysis and death following later. These convulsions do not depend on asphyxia, and they may be absent if only a small quantity of poison has been injected. The paralysis that succeeds is general, and lasts a considerable time before respiration is extinguished, and there is no special paralysis of the lips, tongue, larynx, and pharynx as in cobra poisoning. Birds and reptiles die at once in convulsions. Daboia poison at first quickens the respiration very much more than cobra poison does, and the lessening of the excursus, and the retardation of the respiratory movements do not occur so soon. In daboia poisoning sanious discharges are the rule; albuminuria is always found, should the victim live any time, and after the nerve-symptoms pass over, the subject has to go through a period of blood-poisoning little, if at all, less dangerous than the primary symptoms, from which he may die as late as the end of the second week. The physiological properties of daboia poison undergo great change by its being heated to 100 deg. Cent. (212 deg. Fahr.), in solution, whereas cobra poison remains unaltered.

6. *Sacerdo Filho on Rattlesnake Poison.*—Dr. Sacerdo Filho has published the results of his experiments on the poison of the rattlesnake, *Crotalus horridus* (*Archivos do Museu Nacional do Rio de Janeiro; Nature*, Oct. 20, 1880). 1. The poison of *Crotalus horridus* acts upon the blood by destroying the red blood corpuscles, and by changing the physical and chemical quality of the plasma. 2. The poison contains some mobile bodies similar to the micrococcus of putrefaction. 3. The blood of an animal killed by the snake's bite when inoculated to another animal of the same size and species, causes the death of the latter within a few hours, under the same symptoms and the same changes of the blood. 4. The poison can be dried and preserved for a long time without losing its specific quality. 5. Alcohol is the best antidote to the

poison of *Crotalus horridus* known until now. The publication of the above was followed by a series of letters in the *Times*, averring that the injection of permanganate of potash into the blood is an effectual cure for the bite of those Brazilian snakes. The writers appear, however, to be ignorant of the experiments of Sir J. Fayrer and Dr. Brunton demonstrating the powerlessness of that salt as an antidote.

7. *Biefel and Poleck on Poisoning by Choke Damp and Coal Gas.*—Biefel and Poleck (*Dingl. Polyt.*, tome 240, p. 199; *Journ. of Chem. Soc.*, 1881, p. 853) have investigated poisoning by these gases, and made analyses of poisonous gaseous atmospheres. The air of rooms in which chafing dishes had been exposed was analysed. It was found that the composition of the gas was characterised by the fact that in all cases the proportion of carbonic acid to the amount of oxygen was altered at the expense of the latter, and that the corresponding quantity of air is mixed with a changeable percentage of carbonic oxide. A weak rabbit died when 0.2 per cent. by volume of carbonic oxide was present; others required 0.3 per cent. With coal-gas poisoning, the conditions appear to be different. The air is not deprived of oxygen, and the proportion of the latter to the nitrogen is not altered chemically, but merely by being expelled as the gas flows in. Carbonic oxide may be present to the amount of 0.5 per cent. in air containing illuminating gas before it acts fatally. The limits within which certain quantities of carbonic acid can be inhaled without proving fatal, appear to be larger with common gas poisoning than with choke-damp poisoning. When pure carbonic oxide was introduced into the air to be inhaled, 1.02 per cent. of carbonic oxide could be borne for a short time. Experiments with pure carbonic acid showed that when 6.7 per cent. are present, the animal operated upon becomes feeble, but quickly recovers in air; with 50.4 per cent., however, death resulted. The fatal action of sulphuretted hydrogen is important, inasmuch as its presence in impurified coal-gas—as in gas-works—and in the gases in mines and sewers, is a frequent occurrence. Death follows after exposure to air contaminated with 0.05 per cent. in eighty minutes, the symptoms differing from those with choke-damp. In passing through layers of earth, coal-gas was found to lose about 75 per cent. of its heavier hydrocarbons, and with them the vapours of tar ingredients, which impart to gas its odour. Hence it was observed that the escaping gas had almost entirely lost its characteristic smell. The carbonic acid was increased 25 per cent. by passage of the gas through the soil.

8. *Ossikovszky on Sulphide of Arsenic.*—It is generally supposed that arsenious sulphide whether chemically precipitated, or as orpiment, is non-poisonous, on account of its insolubility. Ossikovszky (*Jour. pour Chem.* [2], Vol. 22, p. 323; *Jour. of Chem. Soc.*, 1881, p. 123) has investigated this question, in consequence of a case having occurred in which food containing arsenious sulphide was suspected of causing poisoning. Commercial orpiment is known to contain arsenious acid as an impurity. Ossikovszky arrives at the following conclusions from his own experiments. 1. During the decomposition of organic bodies, easily oxidisable bodies are oxidised, and pure arsenious sulphide, under such circumstances, is converted into arsenious acid, and, to a small extent, into arsenic acid. The precipitated sulphide undergoes oxidation more readily than orpiment. 2. In cases of poisoning by arsenious sulphide, the oxidation products appear more or less quickly, according to the nature of the decomposing body; the presence of water, and heat, also exert much influence. 3. The quantity of oxidation products is directly proportional to the duration of the decomposition; hence it becomes impossible to determine whether sufficient arsenious acid was present to prove fatal at the time the food was taken, when the suspected article has been submitted to examination after a considerable interval.

9. *Selmi on Arsenic in the Urine after Poisoning.*—Selmi (*Jour. of Chem. Soc.*, 1881, p. 311, from an Italian journal) has undertaken experiments to ascertain in what state arsenic occurs in the urine of animals poisoned with arsenic. Arsenic was given to a large dog, in doses too small to produce fatal results, and the urine was examined from time to time. It was found that during the first period of three days, the urine contained an acid of arsenic precipitable by baryta, and another arsenical compound which was not precipitated by baryta; in the second period of five days, the same substances were found, besides a basic volatile arsenic compound; whilst, subsequent to this, the arsenical base entirely disappeared from the urine.

10. *Ludwig and others on the Localisation of Arsenic.*—Ludwig has studied the question of the localisation of arsenic (*Med. Jahr.*, 1880; *Zeit. für Anal. Chem.*, 1881, p. 608). The following is a *résumé* of his results. In cases of acute, as well as of chronic arsenical poisoning, arsenic is taken up by the bones in small, yet distinctly recognisable quantities. If the case be not fatal, the poison may be detected in the bones a long time—twenty-seven days—after the last administration; in one case it had not disappeared on the fortieth day. It is noteworthy that the liver still contained arsenic. In the brain, in cases of both acute and chronic poisoning, only a small quantity of arsenic is to be found; whilst the liver and kidneys contain a relatively large amount. In acute cases, the kidneys may even contain more than the liver. The muscular tissue contains only a small quantity, but always more than the brain. Arsenic is found in the liver for a longer period than in any other organ. These observations of Ludwig have been confirmed by those of Bergeren, Delens, and l'Hôte (*Ann. d'Hyg.*, 1880, tome iii, p. 23), who found seven times as much arsenic in the liver as in the brain. The kidneys and muscular tissue they also found to contain more of the poison than the brain. Hemberg, also, has arrived at the same conclusions as Ludwig. The assertions of Scolosubuff, which have never entirely received the assent of chemists, that in arsenical poisoning the metal is stored up in the brain, are reported. Johnson and Chittenden, who, in conjunction with Donaldson, have improved the methods for the detection of arsenic (*Chem. News*, Vol. 43, p. 21), also found a mere trace of arsenic in the brain of a dog, to which 100 grains of solid white arsenic was given in eight days, the dose being gradually raised from 1½ grain to 38 grains *per diem*. The dog was killed twenty-four hours after the last dose. Chittenden and Donaldson recommend Gautier's method of destroying the organic matter, based upon the older methods of Orfila and Filhol, consisting of successive oxidations, with nitric and sulphuric acids, at elevated temperatures. They use, however, a much lower temperature than Gautier. W. Fresenius (*Zeitschr. für Anal. Chem.*, 1881) points out the indispensable necessity of observing all the precautions originally prescribed by Fresenius and Babo, in carrying out their well known method for the

detection of arsenic. The neglect of these precautions, by diminishing its sensibility, has led to the disparagement of the method by many chemists. Very few, even of the best text-books, describe the process correctly. THOS. STEVENSON.

REVIEWS.

A Practical Treatise on Nasal Catarrh. By BEVERLEY ROBINSON, A.M., M.D. Paris, Lecturer on Clinical Medicine at the Bellevue Hospital Medical College, New York, etc. London: Sampson Low, and Co. 1881.

THIS work, whichis an essay on the catarrhal affections of the nose, contains many useful therapeutic hints, but we fear it is rather too long to be widely read by the busy practitioner of medicine. 'I have not attempted, says the author, 'to make it learned in bibliographi cal research; indeed, to some methods of treatment adopted by others I have not even referred. I have wished especially to write a succinct though complete account of personal experience and convictions, and thus, if possible, render it valuable as a practical guide to others.' To these lines the author has fairly adhered. We do not, however, think it was necessary to devote four chapters to the anatomy and physiology of the nasal cavities, to the instruments used in the diagnosis and treatment of nasal affections, and to the method of posterior rhinoscopy. Similar chapters are published on these subjects in most of the works on the nose and throat, and must be sufficiently familiar even to those not engaged in these specialities. Passing over the preliminary chapters, we find the author treating of acute and chronic coryza, hypertrophy of the turbinated bones, and follicular disease of the naso-pharyngeal space. By hypertrophy of the turbinated bones the author means hypertrophy of the mucous membrane only, actual hypertrophy of the bones themselves being exceedingly rare. In severe cases, Dr. Robinson recommends the evulsion of portions of the hypertrophied mucous membrane covering the bones, a mode of treatment which has found favour of late with many other American practitioners. In the treatment of follicular disease, he speaks highly of the good effects of cubebs administered internally, when the catarrh does not depend on any specific taint. He thinks that cubebs is in part eliminated by the glands of the throat and nose, and that under the influence of this medicine their secretion loses its acrid qualities and becomes less in quantity. Ammoniacum and sulphur administered internally are also highly recommended. For the fetid odour of the breath, so annoying to the patient in this disease, small doses of salicylic acid are given.

The above are a few of the points of special interest in the book; but there are several others to which, did space permit, we should be disposed to call attention. The book may safely be recommended to those who have hitherto given but little time to the subject. It will, moreover, doubtless repay perusal by those who have made affections of the nose their special study, containing as it does much practical information based upon personal experience.

The Works of Abraham Colles, with Memoir and Annotations. By ROBERT MCDONNELL, M.D., F.R.S. London: The New Sydenham Society.

DR. MCDONNELL, in his preface, confesses that he has undertaken a difficult task in introducing comments and annotations on writings which now form part of the classical literature of Surgery. He has, therefore, wisely decided to present them almost in their original form, with only such few observations as seem to be urgently demanded.

He gives us a very interesting sketch of Colles's life, from his boyhood onward. When only a schoolboy, Colles accidentally picked up a treatise on Anatomy, which had been washed down by a flood; and the perusal of this work first inspired him with a passion for the medical profession. He studied in Dublin, Edinburgh, and London, and finally settled in the first-named city, where he obtained eventually the Presidency of the Royal College of Surgeons of Ireland. The following extracts from Colles's diary may interest young surgeons, fresh from the schools, as showing the progress of his income during the first few years of his career:—'In 1798, sum total of fees received, £8 10s. 9½d. . . . . In the following year, £178 4s. 4½d. . . . . In the third year, £227 10s.; in the fourth year, £421 7s. 6d.' His income then increased rapidly, till it reached the large amount of £6,000 a year.

The greater part of the book is taken up with Colles's writings on venereal disease, on the administration of mercury, and on syphilis in infants. His careful observations and methodical noting of symptoms did much towards furthering the knowledge of venereal disorders, while in the treatment of syphilis he introduced a very wholesome reform. He strongly advocated small doses of mercury, instead of the large ones which it was then the custom to give. However, what even he thought a small dose we should think rather a strong measure, *e.g.*, five grains of pilula hydrargyri three times a day.

Dr. McDonnell sums up Colles's principal discoveries on this subject under three heads.

1. He establishes the opinion that secondary symptoms are capable of propagating the venereal disease.

2. While showing that a child may receive the infection of syphilis by sucking a nurse affected with secondary symptoms, he cannot recollect a case in which the diseased nurse infected the child unless she had an ulceration of the nipple.

3. He makes the important generalisation (which Hutchinson has termed Colles's law) that a father cannot transmit syphilis to his offspring without implicating its mother.

Colles also draws a distinction between the local ulcer and the infecting chancre, contrary to the teaching of Hunter and other authorities of the period.

The book ends with Colles's well-known article, first published in the *Edin. Med. Jour.*, on the fracture of the lower end of the radius, now called 'Colles's fracture'. This is followed by a short dissertation on the cause of the attendant deformity, by Dr. McDonnell, with extracts from various writers on the subject. The works of Colles will occupy a leisure hour pleasantly for anyone interested in the history of Surgery, and particularly of the treatment of syphilis. Dr. McDonnell's annotations are not numerous, but they are concise and to the point.

F. ST. GEORGE MIVART.

A Treatise on the Diseases of the Nervous System. By JAMES ROSS, M.D., M.R.C.P, Assistant-Physician to the Manchester Royal Infirmary. London: Churchill. 1881.

THIS work consists of two large volumes, containing upwards of 1,500 pages. Neurology has advanced so

rapidly within the last few years, and continues to make such great progress, that the size of the work ought to cause us no surprise. We are so accustomed to receive our knowledge of nervous diseases in driblets, that, when we are presented with the accumulated result, the product of busy minds throughout the world, we are better able to realise the growing importance of the subject. We are reminded, also, how much farther the controlling influence of the nervous system extends than was formerly supposed. Dr. Ross has done good service in supplying the profession with what has long been a *desideratum*—a comprehensive, lucid, and practical, as well as scientific text-book of neurology.

The anatomy and physiology of the nervous system has received from Dr. Ross the attention which it deserves, and those who wish to obtain more detailed information than is to be found in our standard books, cannot do better than consult this work. The illustrations, which are numerous, are well executed, and some of the best are original. The practical physician will find ample data for diagnosis and treatment. The pathologist, too, may confidently rely upon the accuracy of the pathological descriptions. Dr. Ross has, in short, given us an excellent summary of existing knowledge on nervous diseases. We have no hesitation in foretelling a successful future to this admirable work.

W. B. HADDEN, M.D.

A Clinical Treatise on the Diseases of the Nervous System. By Professor ROSENTHAL, of Vienna. With a preface by Professor CHARCOT. Translated by L. PUTZEL, M.D. Two vols., pp. 271 and 284. New York: W. Wood. 1881.

THIS treatise gives a good common-sense view of the pathology and treatment of nervous diseases. It is evidently the work of a man who has had considerable opportunities of studying these diseases at the bedside, and who has brought to his task a mind eminently unprejudiced, and devoid of the least spark of enthusiasm. There is a total absence of fine writing, and indeed the book might perhaps have gained were the style a little more vigorous. We confess to a doubt whether any one could be found to peruse Rosenthal's book from beginning to end, owing to the somewhat too common-place way in which the subject has been treated; but for reference, in studying a given case, it is sure to be found of value. A great advantage is the general correctness of his statements, and the evident disinclination of the author to launch out into any theories, however plausible. The work is indeed more critical than original or suggestive; and while it therefore cannot be called attractive in any sense, it may surely be used as a safe guide by the practitioner. A peculiar feature of the chapters on treatment is the evident predilection of the author for hydro-therapeutic measures, which appear to have given very good results in his practice; while he is very cautious in extolling the virtues of drugs. Thus, he says of phosphorus that he has frequently seen it produce disorders of digestion, but that he has observed no benefit from its administration (in ataxy). Hydro-therapeutics, however, he finds to be one of the most efficient methods of treatment in that disease. By methodically stimulating the vast expanse of sensory nerves, and by rendering the peripheral circulation and the cutaneous functions more active, hydro-therapeutic treatment allays, according to him, the central irritation, strengthens the nervous system, and diminishes its great excitability and the dangers to which it is exposed on account of its sensibility to atmospheric changes. Everything, however, depends upon a cautious and circumspect application of the method. He recommends chiefly friction with a cloth dipped in water possessing a temperature of 64 to 59 deg. At the same time a cold compress may be applied to the head, and the patient is then placed in a bath of 75 to 68 deg., into which cold water is slowly poured until the temperature is lowered to 64 or 61 deg. The patient remains in this bath from four to eight minutes; he is then showered, and friction applied to the back. The author likewise speaks well of wet packs combined with cold applications to the head, and followed by cool half-baths, when the patient suffers from spasm or distressing neuralgia; for violent pain in the back he employs frequently renewed cold compresses to the dorsal region, or prolonged cold baths, local packing, and injections of morphine. For improving the activity of the sphincters, he uses ascending douches to the perinæum, and douches to the sacral and hypogastric region. He is also in favour of using electricity, and more especially the constant current, together with hydro-therapeutic procedures.

Professor Rosenthal divides the diseases of the nervous system into ten classes; the first of which comprises diseases of the meninges and parenchyma of the brain, on 155 pages. Then follow the diseases of the medulla oblongata, and of the meninges and parenchyma of the spinal cord. Hysteria and its concomitant nervous disorders occupy a class for themselves; and the author defines hysteria as one of the oldest products of civilisation. The fifth class embraces spasmodic cerebral and spinal neuroses, such as catalepsy, epilepsy, eclampsia, tetanus, and hydrophobia; while neuroses associated with tremor and disorders of co-ordination are made to include tremor and paralysis agitans, chorea major and minor, writer's cramp, and stuttering. For the relief of the latter, the author recommends the rhythmical method, the teacher beating time with a bâton, and the patient keeping his eyes fixed upon the bâton, and regulating his inspiration and expiration accordingly. The interval between these two periods is made longer and shorter at different times, the teacher alternately beating time more rapidly or more slowly, and the pupil accordingly accelerating and retarding respiration. By this means the precipitate and irregular respiration which occurs in most stammerers, is regulated; and the speech itself is corrected by causing the pupil to speak in syllables, in four quarters time and not too loud a tone of voice. The seventh class includes toxic neuroses, saturnine affections, post-febrile diseases, anæmic, ischæmic, and reflex paralyses. Of the latter he says, no doubt correctly, that the class of reflex paralyses will diminish more and more in proportion as the cases are more carefully examined, and that such cases constitute very rare exceptions. Neuroses of the sexual organs embrace seminal losses, impotency, and aspermatism. The ninth class comprises diseases of the cranial and spinal nerves; and the tenth and last the vaso-motor and trophic neuroses, viz., megrim, facial hemi-atrophy, Graves's disease, etc. An index is added to the book, which is, however, not so full as might be desired. The translation is fairly well done, considering it is a re-translation from the French edition; and Dr. Putzel has added a few engravings copied from various foreign works. J. ALTHAUS.

Deformities of the Mouth, Congenital and Acquired, with their Mechanical Treatment. By Oakley Coles. Third edition. Illustrated by eighty-three Wood Engravings, and ninety-six Drawings on Stone. London: Churchill.

This book is a very useful one, both from the scientific and the medical point of view; and the fact that it has reached a third edition shows that it is fully appreciated by the dental surgeon, and, we may add, the medical practitioner. In the chapter on Anatomy of the Normal Palate, attention is particularly directed to the intermaxillary bones, whose presence in the human subject was at one time not only denied, but their supposed absence put forward by some authorities as the best criterion for distinguishing man from the higher apes.

A table of measurements of the palate, as a result of the examination of thirty-four adult skulls of European origin, and thirty-two adult skulls of mixed races, is given. The development of the palate and surrounding parts is fully entered into, and is at present the most complete account in English of the development of these parts. The chapter on Classification of the Deformities of the Upper Jaw is an important one, being the first attempt at classification on a morphological basis.

The author has arrived at the conclusion that the triangle is the best geometrical figure for recording the form of the dental arch, since it gives in a simple and diagrammatic form two of the measurements required, viz., the length and the breadth. The different deformities have been classified under the names of dolichoid, brachoid, macroid, microid, premaxillary prognathous, premaxillary hypognathous, and the lambdoid, or v-shaped arch of congenital idiocy, and to one or other of these divisions it was found possible to assign each case. Some original observations on the correlation between the palate and cranium have been made by the author; and among other results it was found that nearly all defective palates, in so far as speech is affected, are associated with flattening of the left side of the cranium at a point corresponding to the region of Broca's convolution.

The troubles arising from congenital cleft palate occupy a chapter, and a contrivance by which one of them, the difficulty of suckling during infancy, may be overcome, is described. Notice is made of the defects of the palate arising from syphilis; and the treatment of these defects, as well as of cases of cleft palate, and other congenital deformities of the mouth is given. Although the author believes in the soundness of his system of curative dentistry, it is satisfactory to note that he does not undervalue the merits of the surgical operation for congenital cleft palate. The book is well got up, and the woodcuts and drawings on stone are very well executed.

Beiträge zur Symptomatologie und Diagnostik der Hirngeschwülste. Von Dr. M. Bernhardt. Pp. 336. Berlin. 1881.

Contributions to the Symptomatology and Diagnosis of Tumours of the Brain. By Dr. M. Bernhardt. Berlin. 1881.

Dr. Bernhardt's aim in the volume before us is a very definite one. His sole endeavour is to elucidate the subject of the *topical* diagnosis of tumours of the brain. With this object, he has collected the cases of brain-tumour that have been recorded since the publication of Ladame's work in 1865 (to the number of 485); has arranged them in groups according to their situation, verified in all instances by *post mortem* examination; has made a most careful and laborious analysis of the symptoms present in each group; and has then formulated his conclusions as to how far our present knowledge enables us to make in any instance a regional diagnosis. We may illustrate the method of the book by taking as an example the chapter on tumours of the cerebral lobes. There is first a table in which, under the heads of author, age, sex, *post mortem* appearances, sensory symptoms, motor symptoms, symptoms of the special senses, disorders of intelligence and speech, and general remarks—a brief account is given of the 124 cases on which the chapter is founded. The cases are then arranged in three divisions, according as the frontal, the parieto-temporal, or the occipital lobe is the seat of the tumour, and an analysis is given of the frequency with which the different symptoms are met with in each division. Next, the individual symptoms are taken up one after another, and we are shown what their value is in determining the locality of the brain implicated. And, finally we have a *résumé*, not always as concise as it might be, of the conclusions arrived at.

Chapters, formed on this plan, are devoted to tumours of the cerebral superficies, the cerebral lobes, the corpus striatum and optic thalamus, the crus cerebri, the corpora quadrigemina and pineal gland, the pons Varolii, the cerebellum, the medulla oblongata, the pituitary body and anterior cranial fossa, the middle fossa, and the posterior fossa. There is also a chapter on multiple tumours of the brain.

We can only notice in a very cursory manner the conclusions to which Bernhardt's researches have led him; but, before doing this, we may mention that the first sixty pages of the book treat of the general symptomatology of brain-tumours. The symptoms are divided into two classes—diffuse and focal. The former, as a rule, give little or no information as to the locality of the tumour. They are found more or less frequently in tumours of every part of the brain. This class includes headache, vertigo, mental disturbances, vomiting, epileptic convulsions, and optic neuritis. It is to the latter, the local or focal symptoms, that we must look for information as to the situation of a tumour. This class comprises paralysis, convulsions, contractures, choreiform movements, conjugate deviation of the eyes, ataxia, sensory symptoms, disorders of the special senses, vaso-motor disturbances, trophic changes, polyuria, and so on. Each of these is separately examined, and its value as an aid to diagnosis of locality estimated. Dr. Bernhardt adopts Griesinger's dictum, that the fewer the diffuse symptoms, the more valuable the focal symptoms as indications of the locality of the tumour.

Dr. Bernhardt has collected 57 cases of tumour of the cerebral superficies, and it is noteworthy that in as many as 45 cases the tumour was in the fronto-parietal region; twice only was it in the occipital region, and in no instance in the temporo-sphenoidal region. Motor symptoms were present in all but ten cases. The author points out a peculiarity in the mode of onset of the hemiplegia in these cases. The whole side is not paralysed at once, but first, perhaps, the arm, then the face, and then the leg. The hemiplegia is made up as it were of a succession of attacks of monoplegi, and is generally preceded or followed by localised epileptiform convulsions. The occurrence of a hemiplegia with these characters gives us good ground for supposing that the tumour is in

the motor area of the cerebrum, or immediately adjoining it. Bernhardt has met with only three cases in which there was tumour of the motor area without motor symptoms. There seems to be no diagnostic sign by which we can distinguish between superficial tumours of the motor region, and tumours of the cerebral medulla implicating the same region; and, even if tumour of the motor region be diagnosed, we are unable to say how far it spreads anteriorly or posteriorly into non-motor areas, for tumours of these parts are often latent as regards symptoms.

In cases of tumour of the cerebral lobes, ataxy and disturbance of the muscular sense point to the parietal lobe as the seat of the tumour. Hemianopsia and subjective optical phenomena appear sooner perhaps in tumour of the occipital lobe than elsewhere. Disturbances of vision unaccompanied by paralysis of the ocular muscles are very suggestive of tumour of the cerebral lobes; still the presence of solitary symptoms of paralysis, ptosis for example, does not absolutely forbid this diagnosis. Another important symptom in these cases is mental derangement, which shows itself generally as loss of intelligence and obtuseness. Speech is also frequently affected.

The most trustworthy indication of tumour of the corpus striatum or optic thalamus is the appearance of involuntary muscular movements (half like tremors, half like the movements of chorea) in limbs that become paretic, or are already so, and which often present symptoms of diminished sensibility. The movements are very commonly confined to one side. In tumours of the corpora quadrigemina and pineal gland, there is no symptom of pathognomonic value; but if there be paralysis of the trochlear nerve and bilateral paresis of corresponding branches of the oculo-motor nerves, with unimpaired sensibility and absence of unilateral paralytic or convulsive attacks, there is every likelihood that the tumour is situated in this part of the brain. The symptoms that are most to be relied on in the diagnosis of tumour of the cerebellum are occipital headache, a reeling gait, and a peculiar vertigo. The vertigo is independent of paralysis of the ocular muscles, and may be felt even when the patient is at rest. Sudden death is frequently observed in these cases, and is probably due to pressure on the adjoining respiratory centre.

We have left ourselves no space to notice, howsoever briefly, the chapters on the pons Varolii, the medulla oblongata, the different cranial fossæ, and on multiple tumours of the brain. But we have said enough to indicate the thoroughness of the book. It is somewhat disappointing to find that the positive results of such immense labour are comparatively few, for again and again Dr. Bernhardt is forced to the conclusion that it is impossible to make a regional diagnosis with any certainty. Some consolation, however, is to be derived from the thought that the difficulties of a local diagnosis are nowhere so great as in cases of tumour of the brain.

W. J. Dodds, M.D., D.Sc.

NOTES ON BOOKS.

Coleman's Manual of Dental Surgery. (London: Smith, Elder, and Co. 1881.) It is always satisfactory to come across a manual written by an author thoroughly acquainted with his subject, and, with a just sense of proportion, not disposed to magnify unimportant details because they happen to include subjects on which he has especially worked, or minimise in importance others to which he has given less attention. This manual is well balanced, simple, clear, and exact, and is an excellent student's book.

Henfrey's Microscopic Dictionary (4th edit., Van Voorst, 1881, Parts 1 to 2) claims the support and will serve the interests of all lovers of the microscope. It ranges over a wide variety of subjects; it is arranged alphabetically; it is copiously illustrated; has a full list of bibliographical references, and has no rival in the English language as a book of ready and exact reference for the microscope, apart of course from any quite special human or pathological studies which may require special kinds.

Ziemssen's Cyclopædia of Medicine (Sampson Low and Co.) is now completed by the publication of a general index, in a separate volume by itself. Ziemssen's *Cyclopædia* is an enterprise in which German learning and Anglo-Saxon liberality have gone hand-in-hand. This American translation is due to the firm of Wood and Co.; its production in England to Sampson Low and Co. They have shown remarkable punctuality in the publication of the successive volumes, great liberality to their subscribers, to whom they have more than kept their engagements, and whom they have in fact presented with a work of considerably greater size and more elaborate than was at first promised, without a corresponding increase of subscription. Ziemssen's *Cyclopædia* will long remain a standard of the highest class, and an ornament to the physician's library.

NEW INVENTIONS.

REFORM IN WHISKEY.

In all businesses there are 'mysteries' by which traders profit and customers almost as invariably suffer. This has especially been so from time immemorial in the case of whiskey. The 'blending' of whiskey has been an empirical proceeding, leaving a large margin for the imagination and an unlimited field for variations in the age and value of the constituent elements of the blend. The titles by which such blends are distinguished, such as 'Old', 'Very Old', and the like, are equally vague and uninstructive.

The very principle of mixing old whiskey with new is radically false. What is required to destroy the evil effects of new whiskey, is not mixing with old whiskey, which only changes the flavour and dilutes the poison, but the softening changes of age in the whole, which develops and ripens the ethers, and destroys the fusel. In introducing the system of bottling and dating in bond, so that the age of *every bottle* is certified by the Customs' officers, Messrs. Scally and Co., Dublin, have introduced a real and radical reform, which marks a new departure. Whiskey-drinkers have here, for the first time, the distinct and authenticated proof that the spirit is uniformly sound and of the desirable age, and not a mixture in which the poison of the new whiskey is hidden by the ripened spirit of the favourite blend.

SALTS OF THE MINERAL WATERS OF MOURA.

The following is the analysis of these salts: Carbonate of lime, 0,2223; carbonate of soda, 0,0835; carbonate of magnesia, 0,0487; carbon-

ate of iron, 0,0285; chloride of sodium, 0,0178; chloride of magnesium, 0,0518; silica, 0,0104; alumina, 0,0014; lithia, 0,003; organic matter, 0,0212; per litre. They are obtained from the waters of Moura, a village in the province of Allentego, and have an alkaline action which has given them great popularity, and won them a high reputation in their native country, where they are extensively used by the medical profession, and have a great popular fame in the treatment of vesical and genito-urinary inflammations and catarrhs, in acid dyspepsia and heartburn, and the long catalogue of alimentary, vesical, and bronchial disorders, in which a mild mixed alkali is so often useful. These salts are not in any way weakening. It is a new candidate for notice in this country, but comes well vouched. The agent is S. Camillo de Figueiredo, 8, Park Avenue, Longsight, Manchester.

THE COURT ST. ETIENNE ARSENICAL WATERS.

Since our recent remarks upon these waters, it has come to our knowledge that some very satisfactory experiments have been made with them on shipboard in connection with sea-sickness. In some recent voyages to America, and in one case during terrible weather, when all on board save the crew were suffering from *mal de mer*, the administration of the Court St. Etienne water in a short time caused the sickness to disappear altogether; in some cases the effect is said to have been almost instantaneous. These experiments were watched with much interest by Dr. Barkany, an Austrian practitioner, and he tells us in his report 'that it was administered to 182 passengers, and that it failed in only three cases, which happened to be ladies, one of whom was suffering from stomach disorder'. He further remarks that 'such success was never before obtained by the use of any medicaments'. These facts are interesting and cheering to that large mass of suffering humanity who can scarcely enter a boat without immediately feeling the disagreeable effects of the motion in inducing nausea.

MISCELLANY.

COHN ON THE EYES OF MEDICAL STUDENTS.—Dr. Cohn (*Med. Jahbr, d. K. K. Gesell. d. Aerzte z. Wien.*, 1881) says that fourteen years ago he found that 53 per cent. of the Catholic theological students, 55 per cent. of the law students, 56 per cent. of the medical students, 67 per cent. of the Evangelical divinity students, and 68 per cent. of the philosophical students, were myopic. In the summer of 1880, 59 per cent. of the medical students were myopic, 55 per cent. of the junior or non-clinical students, and 64 per cent. of the advanced or clinical, the longer studies of the latter being probably the cause of the higher percentage. In discussing the cause, Cohn says that the blame lies entirely upon the methods of study. The lecture-halls are badly lighted, the benches and desks so arranged as to make writing most uncomfortable and difficult, the type of the text-books is too small, and the lines too long (straining accommodation when the eye passes from the ends to the middle), as well as too closely printed. He recommends that the light should fall fully on every spot in hall; that the benches should be 45 centimètres (17.7 inches) high, and 40 centimètres (15.8 inches) broad, while the desks should be 70–75 centimètres (about 29.5 inches) high, and 35 centimètres (13.8 inches) broad, to allow of easy writing. The type, he says, should be 1.5 millimètres (.06 inch) in size—of small *n* for example—and 0.25 millimètres (.01 inch) in thickness of line; the intervals between the lines should be at least 2.5 millimètres (.1 inch) and the lines should not exceed 100 millimètres (about 4 inches) from one side of the page to the other.

REMARKABLE EQUABILITY OF TEMPERATURE.—During the intense cold of last winter, Ilfracombe was one of the three places where the temperature never went below 20, and the minimum was only below 32° on sixteen days, and the maximum on three days. At Torquay these numbers were respectively 19 and 5. The average mean range of temperature at the former place was about 8°.2. The mean temperature for January 1881 of the entire kingdom was 30°.4, and varied from 36°.7 at Ilfracombe to 26°.7 at Buxton (Vide *Met. Record*). For February, the mean temperature for the kingdom was 37°.7; and, again, Ilfracombe takes first place with 42°.7, the lowest being at Kelstern, 35°.1 (Vide *Met. Record*). In March the mean temperature for the country was 42°, and varied from 45°.2 at Ilfracombe and Teignmouth to 38°.4 at Alnwick (vide *Met. Record*). The mean temperature for Torquay for January was 34°, for February 39°.7, and for March 44°.1. We annex a table of the observations, taken at the Ilfracombe Hotel Observatory, upon which the above results were based.

	Mean.	Max. Reading.	Min. do.	Extreme Range of Temperature.	Mean Range of Temperature.
1880 Nov.	47.8	57.5	31.5	26.	9.7
,, Dec.	48.2	56.	35.	21.	7.4
1831 Jan.	36.7	52.	20.	32.	8.7
,, Feb.	42.7	55.	32.	23.	7.2
,, Mar.	45.2	57.5	28.5	29.	8.9

UNIVERSITY OF EDINBURGH.—The following candidates have passed the first professional examination for medical and science degrees, October 1881:—M. S. P. Aganoor, Alfred Aikman, M. S. Altounian, J. M. Balfour, M. M. Basil, B. K. Basu, James Bell, G. L. Bonnar, Frederick Bond, J. E. Bottomley, Paul Bowes, Herbert Bramwell, D. M. Brown, T. A. Brown, J. R. Burns, C. J. Burton (Science), J. M. Cadell, Henry Caudwell, Edward Carmichael, Thomas G. Churcher, E. W. Clarke, J. G. Cossins, A. H. Croucher, A. S. Cumming, Daniel Davies-Jones, Alexander Davidson, A. N. Davidson, D. R. Dow, Thomas Easton, Edwin Eckersley, George Fisher, J. W. Fox, A. E. Grant, Benjamin Griffiths, J. S. Haldane, P. B. Handyside, W. C. Helme, George Hewlett, W. H. Hill, Archibald Hood, T. A. F. Hood, Robert Howden, R. E. Horsley, C. W. Howatson, A. W. Hughes, B. E. Iastrzebski, David Jack (Science), R. Jackson, Hugh Jamieson, Hugh John, John Johnston, Thomas Johnstone, G. H. Kenyon, Henry Ker, Francis Kraemer, David Laing, W. S. Lang, A. W. M. Leicester, W. M. Little, H. J. Mackay, Wm. Mackay, F. L. M'Kenzie, J. H. M'Kenzie, N. J. M'Kie, John M'Myn, Archd. Macqueen, G. D. Malan, J. W. Martin, D. J. Mason, Angus Matheson, R. T. Meadows, Wm. Miller, Duncan Menzies, Robert Mitchell, B. M. Moorhouse, A. E. Morison, E. J. B. du Moulin, Daniel Mowat, W. J. Munro, J. H. Neale, J. H. Neethling, Sydney Partridge, Ian Paterson, M. G. Pereira, F. A. Pockley (with distinction), G. Y. Polson, H. P. Prankerd, H. H. Pridie, Joseph Priestley, J. M. S. Preston, E. E. T. Price, A. C. Purchas, Alwin Raimes, T. R. Rait, C. A. Renny, John Rigg, G. M. Robertson, John Robertson, J. S. Robertson, T. H. Robinson, Joseph Rutter, A. O. Schorn, William Shand, John Simpson, George Smith, William Sneddon, Y. S. Snitwong, Arthur Solomon, J. C. Steedman, H. F. D. Stephens, A. J. Stiles, H. J. Stiles (with distinction), J. W. Stirling, J. M. Stormonth, G. H. H. Symonds, John Sykes, T. S. Tanner, J. C. Taylor, Thomas Taylor (Science), William Taylor, Andrew Thomson, D. G. P. Thomson, H. A. Thomson, J. A. Thomson (Science), Thomas Thyne, Alfred Turner, J. W. O. Underhill, David Wallace, David Walker, E. F. S. Walker, N. P. Walker, L. W. Watson, A. K. Watt, E. G. Westenra, G. E. C. Wood, J. E. Wolfhagen, J. C. Young.

The London Medical Record.

REICHERT ON POISONING BY CARBOLIC ACID.

Dr. E. T. Reichert, in a Contribution to the Study of Cardiac Depressants (*Amer. Jour. of Med. Sci.*, Oct. 1881), summarises fifty-six cases of poisoning by carbolic acid, and analyses the physiological action of this poison. Superficially reviewing the general symptoms of poisoning by carbolic acid, he finds that the poison is absorbed with great rapidity, and the evidences of its toxic properties are soon manifested. In the course of a few minutes, these become so rapidly aggravated that the system is profoundly affected; and, indeed, two cases offer illustrations of its acting with the same deadliness and frightful rapidity as have been noted in cases of poisoning by the more virulent hydrocyanic acid. In cases which have been under observation from the time of the ingestion of the poison, symptoms have been observed to appear almost immediately, which indicate that the acid finds its way into the circulation as soon as it comes into contact with an absorbent surface, whether it be skin, stomach, rectum, pulmonary acini, or wounds.

The first symptom generally appreciated is a burning pain in the parts of the body with which the acid has come into contact, provided the acid has been of sufficient concentration. In some cases, however, no pain is experienced, and even a diminution of sensibility may be present. Disorders of cerebration are then likely to follow, as evidenced by a confused condition of thought, difficulty of speech, depression, restlessness and bewilderment, vertigo, and delirium. Insensibility is one of the most frequent, earliest, and constant of the phenomena, but occasionally it does not make its appearance until late. Nausea and vomiting may be present, but this does not occur in more than twenty per cent. of the cases. Uncontrollable vomiting occurred in one case, while in another it was very severe, and in a third was moderate. Even drugs seem to have little power to bring about emesis, for, in about twenty per cent. of the cases in which different emetics were given, vomiting occurred in about one-half of them. The pulse and respiration, like the nervous system, are seriously affected; the former in a large percentage of cases becoming feeble, frequent, and intermittent, but in very exceptional cases slow and weak. The respiration was soon affected, and in more than half of the cases, where it was particularly noted, was stertorous to a greater or less, but generally well marked degree; and in rare instances it is described as being dyspnœic, slow, husky, or hurried. Occasionally the face is flushed, but more often a paleness is present. The skin is exceptionally hot and dry, and in a large portion of cases is cold and clammy, especially in the extremities; and in a single case a hot skin was followed by coldness. Lividity, more or less marked, is a frequently noted symptom; salivation was also observed. The temperature was stated to have risen above the normal in three cases, while in two it was lowered, and in a sixth case was natural. Frothing at the nose and mouth occurred in about ten per cent. of the cases, and deglutition was difficult in five, and impossible in ten. In four, the odour of the acid was detected in the exhalations. In ten cases, the urine was noted as being coloured greenish, blackish, or brownish.

Relaxation of the bowels was occasionally noticed, and the stools in several instances were described as being brownish, blackish, or greenish. The pupils were variously affected, but in over half of the cases in which they were specially examined were found to be contracted; in less than a fifth they were dilated; in four they were unaffected; in two, dilatation was followed by contraction; and in another there was first dilatation, then contraction, and ultimately dilatation. Convulsive movements occurred in fourteen cases; in one they were violent; in three were mere twitchings; and in a similar number trismus was present. Anæsthesia was recorded in about fifteen per cent. of the cases, but was undoubtedly present in the vast majority where insensibility was recorded to signify this condition, together with a loss of consciousness. Protrusion of the eyeballs, pain in the head or back, hiccough, muscular weakness, tremors, thirst, harshness of voice, and involuntary micturition were also exceptionally noted. Symptoms of pneumonia, pulmonary congestion, or of meningitis, or muco-purulent expectoration, were observed in six cases.

Pain in the mouth, œsophagus, and stomach, frothing at the mouth or nose, insensibility, difficult or impossible deglutition, a cold and clammy skin, stertorous respiration, a frequent, small, and intermittent pulse, contracted pupils, anæsthesia, and a brownish, blackish, or greenish urine, are the most constant and characteristic symptoms, and the latter is probably pathognomonic.

Experiments made on the lower animals yield results in accordance with the results produced in man. The nervous system is profoundly affected. Convulsions are more prominent than in man, and are, indeed, almost constant symptoms. They are generally clonic, but may assume a decidedly tetanic character. Whether their origin is spinal or peripheral, is a matter of dispute. Most probably it is entirely centric, as is also the loss of reflex action. The cerebral functions are early and seriously affected. The action of the acid on the circulation has not been fully studied. There can be no doubt, however, that the poison acts ultimately as a direct and decided cardiac depressant—causing death indeed very frequently, if not in the large majority of cases, in this way. The frequent, feeble, and intermittent pulse, frequently noticed in man, is strong evidence of a decided depressant action on the heart, as is also the slow and feeble pulse, which at times has been noted. The at first frequent, but afterwards deep, slow, and laborious respirations, have both a centric and a peripheric origin, and are due, at first, to a stimulation of both the pneumogastric peripheries and centres, and later to a paralysis of the same. The local action of the acid is both irritant and caustic. The walls of the stomach may be disorganised; but the gastric mucous membrane is not always affected throughout. The occurrence of nausea, retching, and emesis, or the utter impossibility of inducing these phenomena by giving emetics by the stomach, may be explained by the irritant and corrosive properties. When the acid first reaches the gastric mucous membrane, it at once irritates the peripheries of the vagi nerves; and whether there be vomiting following the irritation, or whether the irritation is quickly superseded by a physiological destruction of the terminations of the nerves, is obviously determined by the relation existing between

the rapidity with which the irritant effects are followed by those of a caustic character. That the peripheril ends of the vagi are soon seriously affected and functionally destroyed is corroborated by the fact of the great difficulty, or even impossibility, of inducing emesis by those drugs which effect this phenomenon by a direct local irritant action.

What becomes of carbolic acid in the system, and the condition in which it is absorbed, are unsolved questions. It is certainly in part eliminated through the urine and the skin. The peculiar coloured urine contains oxidation products of the acid, and also salts of conjugated phenol acids. The blood is found to be dark and fluid. The asphyxiated condition is probably due to a paralysis of the pneumogastric apparatus.

The *diagnosis* of carbolic acid poisoning in most cases should not be attended with difficulty, for the characteristic odour of the drug can generally be detected, and, in conjunction with the white or brownish stains about the mouth, and with the most characteristic symptoms as above noted, would almost be conclusive evidence, and especially so if the peculiar discoloration of the urine be present.

Treatment has usually been of little avail. The emetics used were powerless to produce emesis. The hypodermic injection of a centric emetic, as apomorphia, is indicated. Saccharated lime-water appears to afford relief. Baumann asserts that the soluble sulphates, as Glauber's and Epsom salts, are efficacious by forming sulpho-carbolates, which are innocuous. Cerna (*Philad. Med. Times*, 1879, i, p. 592) found decided evidences of the efficacy of the soluble sulphates, and although no chemical combination occurs on simply mixing carbolic acid with these salts, it is not improbable that in the animal economy such combination may occur.

THOS. STEVENSON, M.D.

TALAMON ON ANALYSIS OF NECROPSIES OF DIPHTHERIA.

M. TALAMON has presented to the Société Anatomique (*Le Progrès Médical*, 1880, No. 38) a long report of the *post mortem* appearances of 108 cases of diphtheria in little girls of ages generally varying from two to six years, some being older. Of these, nine were complicated with other diseases, so that the morbid appearances could not be fairly attributed to diphtheria; these are left out of account, 99 cases remaining for analysis. The pharynx was occupied by false membranes sixty-four times out of the 99 cases; the disease extended to the œsophagus in only one case; and the author recalls the opinions of Empis and Isambert, that air is necessary to the growth of the false membrane. In 17 cases there were marks of recent inflammation of the pharynx, and in four others the membranes had been observed during life, but death occurred from cardiac or pharyngeal paralysis, twenty or twenty-two days after the commencement of the disease, by which time the pharyngeal mucous membrane had recovered. In 14 cases, therefore, it is permissible to regard the disease as having commenced in the larynx. The larynx was found diseased in 60 cases; in twelve others, false membranes had been expectorated after operation. In two cases, the false membranes had not affected the true vocal cords, and had given rise to no symptoms of croup. The trachea was implicated almost as often as the larynx, forty-seven times in all, the disease being generalised over the tracheo-bronchial mucous membrane in thirty-nine cases; the false membrane was rarely continuous, but in patches. From a table of the period of the year in which the cases occurred, M. Talamon arrives at the following conclusions. 1. Simple pharyngeal diphtheria was more frequent in summer than in winter, in the proportion of 40 to 18.64 per cent. 2. Simple laryngeal diphtheria was more common in winter than in summer, in the proportion of 18.64 to 7.50 per cent. 3. Tracheo-bronchial complications were more common in winter, in the proportion of 55.93 to 35 per cent.

Lobular pneumonia, splenisation, atelectasis, and emphysema occurred in 72 cases, chiefly affecting the middle and lower lobes of the right lung. Pleurisy existed in eight cases, in seven being restricted to a fibrinous exudation; in one, there were a few ounces of serum. In eight, there were subpleural ecchymoses occurring in malignant cases. The state of the bronchial glands was noted only 63 times; in 48 they were enlarged, violet-coloured, sometimes softened and friable.

The stomach was altered in 17 cases; in 16 the lesions being confined to reddening and punctiform ecchymosis, possibly attributable to the emetics employed during life; in one case the mucous membrane was of a bright red colour, and covered with false membranes. In some of the other cases, the alterations of the stomach may not have been due to emetics, and probably were not.

The small intestine was injected in 17 cases. The ileum especially was the seat of a follicular catarrh, with and without swelling of Peyer's patches, and most marked near the ileo-cæcal valve; this was present in 81 cases.

The large intestine was reddened, or had its follicles swollen and congested, in 75 cases. The state of the mesenteric glands was noted 85 times; in 59 there was some alteration in size, colour, and consistence.

The liver, in 84 cases, was congested, deep violet coloured, with white irregular patches on the anterior surface. In one case, the liver was yellow and much enlarged. In three cases, there were perihepatitis and adhesions to the diaphragm.

The spleen, in 34 cases, showed alterations of size, colour, or consistence; in one case it was very soft, in 16 notably enlarged; in 10 the Malpighian bodies were enlarged, in 3 there were cheesy nodules in it, in 1 there was an old cicatrix.

The kidneys were, in 47 cases, deeply congested, violet coloured; the consistence was normal, the size sometimes increased, the capsules easily stripped. In 24 they were soft, yellow, with stellate veins on the surface; the capsules stripped, but tore the renal substance. In 28 they were normal. Out of 42 cases, in which albuminuria was looked for, it was found in 21, of which 12 belonged to the first series, 7 to the second, and in 2 the kidneys were normal; of those free from albuminuria, in 7 the kidneys were of the first, in 3 of the second series, and in 11 normal.

The pericardium often showed ecchymosis, but never any trace of inflammation.

The myocardium always appeared healthy, except in two cases of sepia-coloured blood, in which it had the greyish look peculiar to this condition. The endocardium and valves were always smooth, supple, and healthy. Clots in the heart were very frequent; those on the left side were recent and unimportant; in the right, fibrinous clots were found 41 times, and

partially fibrinous clots 39 times. Sepia coloration of the blood was noted six times; in four cases it was very marked. Robert Saundby, M.D.

DA COSTA ON THE NERVOUS SYMPTOMS OF LITHÆMIA.

Dr. Da Costa, Professor of Medicine at the Jefferson College, Philadelphia, publishes, in the *American Journal of Medical Sciences* for October, an interesting article on the less obvious and less generally recognised nervous symptoms associated with lithiasis or lithæmia. The first and most important of these is vertigo. It is astonishing. he says, how many cases of vertigo turn out on close investigation to be attended by the superabundance of lithic acid lithates in the urine; how persistent are the symptoms; how grave the apprehensions until their true source is discovered, and the treatment directed to it. Cases go on for years, some of them weighed down with the suspicion of organic cerebral mischief; lives are wrecked by the enforced abandonment of accustomed pursuits; the remedies are hurtful rather than helpful until the hidden cause of the malady is discovered, and by steady perseverance removed. Lithæmic vertigo is a giddiness frequently repeated; often there are several attacks daily for a few days, and then there is a much longer interval. It happens irrespective of exertion, although long continued fatigue, especially in reading or writing, or mental worry, may excite it. Anything that aggravates or induces the lithæmic condition developes it promptly. Special articles of food may do so, and in some a few glasses of hock or a single glass of Burgundy or champagne will bring it on to a certainty. The vertigo is objective, not subjective—objects seem to whirl round the sufferer, not he himself to move. The giddiness is not associated with loss of consciousness; at all events the patient does not fall, although he may have to hold on to something for support. From the alarm and distress which attend it, it is difficult to form any idea of its duration, but it may be safely said that it rarely lasts more than a minute. It may come on without warning, or be preceded by a sense of emptiness in the head, by specks floating before the eyes, and dimness of sight. When often repeated, it produces effects on the special senses; sight is less acute, the field of vision is limited in size, letters look blurred, and double vision may occur. The eye or part of one eye may become temporarily blind, and on ophthalmoscopic examination there is detected congestion, especially fulness of the veins. Long continued and frequently repeated attacks may give rise to permanent changes in the disk. The sense of hearing is sometimes impaired for a day or two, and the patient complains of noises in the ears. It seems probable that this vertigo is produced by the impure lithæmic blood. Whether this acts on the vaso-motor nerves, and through them on the cerebral circulation, or primarily on the nerve-centres, remains to be seen.

Headache is not, on the whole, a prominent symptom of lithæmia. A dull feeling in the head, especially frontal, happens at times for a day or two, and severe acute periodic headaches, neuralgic in type, are not uncommon. Neuralgia is a frequent complaint of lithæmic subjects, and there is hardly a nerve in the body that can ache which is exempt from it. Brachial neuralgia, with pain shooting down the fore-arm to the tips of the fingers, intercostal neuralgia, sciatica, and neuralgia of the breast, are all common. A not uncommon form of lithæmic neuralgia is gastralgia.

Cramps in the legs and muscular twitchings are often met with in those suffering from lithæmia. They are apt to come on at night, and are very annoying and painful. They particularly affect the gastrocnemii, and occur more frequently in winter than in summer. Anæsthesia is also a symptom, though not a common one. It is generally confined to an arm or leg or part of the thigh, but it may be met with on corresponding parts of both arms and legs. Sleeplessness, sensitiveness to sounds, susceptibility to odours, and nervousness, are all common accompaniments of the lithæmic condition. The memory is often greatly impaired, and the patient soon becomes incapacitated for mental exertion.

Treatment directed to the lithiasis will soon remove these symptoms and their attendant evils. The indiscriminate use of tonics does much harm. Great attention must be paid to diet, the chief indication being to cut off nitrogenous food. Beef, mutton, cream, fat, and sugar, are forbidden, and the less the patient takes of alcohol the better. Champagne is most injurious, a light claret is least objectionable, but water is the best drink of all. Exercise is most important, and the skin should be stimulated to action either by friction or the Turkish bath. To live constantly in the open air, to take a long mountain tramp, or an ocean journey, are the best prescriptions for those who can comply with them. William Murrell, M.D.

KLEUDGEN ON ALBUMINURIA IN EPILEPSY.

An exhaustive paper by Dr. Kleudgen in the *Archiv für Psych.*, Band xi, Heft 2, bids fair to set at rest the much vexed question as to whether albuminuria is a common result of an epileptic attack. The author has made many preliminary experiments to ascertain the tests for albumen, which are at once the most delicate and the least liable to any source of fallacy. Observations were made upon fifty-seven confirmed epileptics (36 males and 21 females), aged from 13 to 66 years. In women, the urine was always drawn off by catheter. It was found that the urine passed within four hours of an epileptic attack nearly always contained traces of albumen; in only about one-eighth of the cases was it entirely absent. But, pursuing his observations further, Kleudgen found, on examining the urine of these same patients as long as possible after a fit, that quite as large a proportion of the samples contained small amounts of albumen. Further, on testing the urine of a large number of insane patients of various kinds, but not epileptic, it was found that albumen was present in just about the same number of cases. Not content with this, Kleudgen next directed his attention to the urine of healthy adults. In eight cases out of thirty-two attendants upon the insane, he found a small quantity of albumen to be present in the urine.

The author's conclusions are these. There are traces of albumen in all urine which presents a certain degree of concentration (an increased specific gravity). Slight increases in the quantity of albumen may occur periodically without a corresponding rise in the specific gravity, and without the existence of renal disease. The urine secreted after an epileptic

attack does not present any peculiarity, either in reaction or in specific gravity. It is very rare that an attack of epilepsy determines an augmentation of the quantity of albumen in the urine; when this occurs it is only very slight; moreover, in males it is generally due to the presence of semen in the urine. Renal casts are not found in the urine of epileptics unless kidney-disease be present.

Accepting the above results as true, it is easy to trace the origin of the contradictory statements which have been made upon this matter. Those observers who have only used the ordinary methods of testing for albumen, have found none in the urine of those epileptics who were free from renal disease. Others, who have made use of more delicate tests, have found small quantities of albumen almost constantly present; but they have failed to note that this is also the case in the same patients while temporarily free from convulsive attacks, also in insane patients of all kinds, and in a large proportion of healthy adults of both sexes. We may add, that a number of the most careful and exact observers have been ranged upon both sides in the controversy which has been so long continued upon this subject.

C. S. W. COBBOLD, M.D.

STERNBERG ON THE ETIOLOGY OF MALARIAL FEVERS.

Dr. GEORGE M. STERNBERG thus concludes his report to the National Board of Health (*Bulletin*, July 23, 1881), giving the results of his experimental investigations regarding the cause of malaria.

A great number of minute algæ, including bacteria of various forms, are found upon the surface of swamp-mud in the vicinity of New Orleans, and also in the gutters within the city limits. Many of these forms may be successfully cultivated in solutions of fish-gelatine (method of Klebs); and this fluid, previously innocuous, acquires pathogenic properties as the result of inoculation with these organisms.

It is evident that the pathogenic properties acquired by gelatine solution and other organic liquids after inoculation with bacterial organisms is due, directly or indirectly, to the presence of these bacteria; for, if they be excluded, such fluids may be kept indefinitely without undergoing change, and are innocuous when injected beneath the skin of a rabbit. Some of the organisms found in swamp-mud, in gutter-water, and in human saliva, are capable of multiplying within the body of a living rabbit, and the fluids and organs containing them (blood, serum from cellular tissue, spleen, etc.) possess virulent properties. In other words, an infectious disease is produced, which may be transmitted from animal to animal by inoculation.

Among the organisms found upon the surface of swamp-mud, near New Orleans, and in the gutters within the city limits, are some which closely resemble and, perhaps, are identical with the *Bacillus malariæ* of Klebs and Tommasi-Crudeli; but there is no satisfactory evidence that these, or any other of the bacterial organisms found in such situations, when injected beneath the skin of a rabbit, give rise to a malarial fever corresponding with the ordinary paludal fevers to which man is subject. The evidence upon which Klebs and Tommasi-Crudeli have based their claim of the discovery of a *Bacillus malariæ* cannot be accepted as sufficient: (*a*) because, in their experiments and in my own, the temperature-curve in the rabbits operated upon has in no case exhibited a marked and distinctive paroxysmal character; (*b*) because healthy rabbits sometimes exhibit diurnal variations of temperature (resulting apparently from changes in the external temperature), as marked as those shown in their charts; (*c*) because changes in the spleen, such as they describe, are not evidence of death from malarial fever, inasmuch as similar changes occur in the spleens of rabbits dead from septicæmia produced by the subcutaneous injection of human saliva;* (*d*) because the presence of dark-coloured pigment in the spleen cannot be taken as evidence of death from malarial fever, inasmuch as this is frequently found in the spleen of septicæmic rabbits (*l. c.*)

While, however, the evidence upon which Klebs and Tommasi-Crudeli have based their claim to a discovery is not satisfactory, and their conclusions are shown not to be well founded, there is nothing in my researches to indicate that the so-called *Bacillus malariæ*, or some other of the minute organisms associated with it, is not the active agent in the causation of malarial fevers in man. On the other hand, there are many circumstances in favour of the hypothesis that the etiology of these fevers is connected, directly or indirectly, with the presence of these organisms or their germs in the air and water of malarial localities. The truth or falsity of this hypothesis can only be settled by extended experimental investigations; and, while further experiments upon animals may lead to more definite results, it seems probable that the *experimentum crucis* must be made upon man himself.

In a disease not of a fatal character, and one for which we have a prompt and reliable remedy, it would seem that subjects for experiment might be found, especially among medical men and medical students, who have always shown themselves ready to subject themselves to inconvenience, or even to danger, in the pursuit of scientific discoveries of value to mankind. The method of conducting such experiments which seems to me to promise the best results is the isolation and cultivation of the various organisms found in malarial localities which may possibly be concerned in the production of malaria, a careful study of the life-histories of these organisms, and an experimental investigation of the physiological action of each when taken into the stomach, or respired in a dry state, by healthy individuals. Such a study, to be of value, will necessarily involve a considerable expenditure of time and money, and requires that the experimenters shall be familiar with the most approved methods of making culture-experiments and with the *technique* of microscopical manipulations with high powers, improved illuminating apparatus, etc.

Another method worthy of trial in connection with this, would be to carefully study the bacterial organisms found in the mouth and alimentary canal of persons suffering from malarial fevers,† as compared

* This statement is based upon observations made subsequently to those recorded in this report. (See special report to National Board of Health. 'A fatal form of septicæmia in the rabbit produced by the subcutaneous injection of human saliva.'—*Bulletin*, No. 44, April 30, 1881.)

† I do not refer to an examination of the blood, as a careful search in a considerable number of cases with a Zeiss's one-eighteenth-inch objective has failed to demonstrate the presence of any organisms in the blood of patients suffering from pronounced malarial fever. The absence of 'germs' from the blood does not, however, settle the question against the supposition that these fevers are parasitic germ diseases, as the pathogenic organism may find a congenial habitat in the alimentary canal, in the lymphatics or elsewhere, and may not thrive in the blood-stream itself. In the fatal form of septicæmia which I have recently investigated, the micrococcus multiplies abundantly in the subcutaneous connective tissue from the moment that it is intro-

with the common forms constantly found in the same situations in healthy individuals, with reference to the determination of the presence of unusual forms or of an abnormal abundance of common forms, or of possible physiological varieties of these forms not possessing morphological peculiarities.

Finally, I may say that I entered upon this investigation without prejudice, but hoping that I might be able to confirm the conclusions of Klebs and Tommasi-Crudeli, whose researches were evidently prompted by a truly scientific spirit, and were conducted in accordance with strictly scientific methods. I believe that their work will prove useful in many ways to future explorers in this field, and have an abiding faith that light will eventually be shed upon this and similar problems by the persistent and intelligent application of the experimental method supported by all the resources of modern science.

GIBSON ON THE ETIOLOGY OF CARDIAC VALVULAR LESIONS.*

Recent observations on the pathogenesis of cardiac and vascular diseases have thrown some new light upon the nature, if not upon the absolute causation, of such processes. These are of interest, not only to the pathologist, but also to the physician, and it is our present purpose to bring together certain facts bearing upon the origin of these changes.

In the following remarks, only organic disease of the valves will be dealt with. Relative incompetence of the valvular mechanism does not enter within the scope of the present article, and may be dismissed in a word. Any state inducing deficient nutrition of the cardiac muscle, either absolutely or in relation to the amount of work to be performed, will produce in the end incompetence by dilatation of the orifices. All febrile conditions, and every instance of anæmia, bear witness to the fact, and it is now so universally admitted that no further notice of it is required.

Turning to lesions of the valves, it will be well to take up the various changes *seriatim*, but giving necessarily very unequal attention to the different forms of disease. Rokitansky gives the following classification of valvular diseases:—1. Defective and excessive formation; 2. Hypertrophy and atrophy; 3. Anomalies of form; 4. Anomalies of consistence; 5. Separations of continuity; 6. Diseases of texture; (*a.*) Inflammation; (*b.*) Adventitious structures.

This classification has the merit of extreme conciseness, but it does not include all our knowledge of valvular disease, and therefore we shall not adhere to it, but discuss the subject according to the annexed order:—I. Diseases of valves: 1. Malformations; 2. New formations; 3. Hæmorrhages; 4. Degenerations; 5. Inflammations. II. Injuries of valves.

The great storehouse of information regarding malformations of the valves, as well as of the heart generally, is still to be found in the writings of Peacock. To the facts which he has made known, nothing has to be added. The number of valve-segments may be excessive, apparently by failure of union of the component parts; or they may be too few, from the junction of two or more segments along their adjacent edges. Sometimes all the segments are thus united, leaving but a small orifice. In any such case of union, there is usually evidence of it in the form of a more or less evident ridge, marking the place of fusion. Whether such cases are caused by perverted development, or by intra-uterine endocarditis, is of small moment; the undoubted fact remains that they are congenital. Those cases in which the valve-segments are too numerous, cannot be caused otherwise than by arrest of development.

During recent years, a considerable amount of information has been obtained on the subject of new formations. This has been embodied in an admirable paper by Garel, which lately appeared. He points out that a large number of intracardiac tumours have been placed on record, especially by Choisy, Aran, and Caron, but that these have not yet found their way into the pathological text-books. The vast majority of these tumours belonged to the left side of the heart. Burns described a tumour of the right side of the heart, but it was attached to the interior of the auricle, and, although it projected into the ventricle, had no connection with the valvular mechanism. The same remark applies to Gairdner's case of pediculated tumour of the right auricle—a case most interesting on account of tricuspid stenosis having been diagnosed ten years before the patient's death. Pigué, quoted by Garel, placed on record an instance of small tumours of the tricuspid valve; and Debove, also referred to by Garel, described a case of myxoma of the tricuspid valve. These instances sum up the amount of our experience of non-inflammatory new formations affecting the right side of the heart; but, as already remarked, such tumours are relatively common on the other side of that organ.

In Rokitansky's work, the adventitious structures mentioned are said to be 'almost entirely limited to the occurrence of fibroid tissue aud anomalous osseous substance', and these are described as being caused by hypertrophy or inflammation, with secondary changes in the products so arising. 'Atheromatous disintegration of newly deposited endocardium' is also included under the same head, which finally also embraces carcinomatous vegetations. Not a word is given to new formations independent of inflammation and diathetic conditions in this or in any other text-book; but enough has been said in this article to show that, although thus ignored by authors, they are not unknown to pathologists.

An entirely new chapter on the subject of valvular lesions has just been written. When prosecuting an inquiry into the relative resistance of the cardiac orifices and valves, the author of this article stumbled last year upon a small tumour attached to the tricuspid valve of a sheep's heart. It projected from the auricular surface, was of a purple hue, and had the size of a small pea. On microscopic investigation, it was found to be a blood-clot occupying the fibrous structure of the valve. It was quite free from the least trace of inflammation, the endocardium being perfectly healthy, and the fibrous tissue entirely destitute of any inflammatory products. The examination showed a cross section of the small vessel from which the hæmorrhage had proceeded, and also demonstrated that the clot was undergoing a fibrous transformation. Taken by itself, this instance would be of comparatively small value, but its publication was speedily followed by a

duced by injection, but it does not enter the blood until the case is near a fatal termination. Pasteur has found the same to be the case in a form of septicæmia studied by him in which the pathogenic organism is a long and slender vibrio.

* *The Birmingham Medical Review*, October 1880.

case of much interest. Garel, in the excellent paper already referred to, has recorded the case of a man whose tricuspid valve was the seat of a similar extravasation, causing a large projection from the surface of the valve. The tumour was of mushroom form, and was associated with some vegetations, so that there may have been an inflammatory affection involving one of the vessels of the valve. Whether spontaneous or caused by erosion of the vascular walls, there can be no question regarding the nature of the tumour. The minute account of the microscopic appearances given by Chandelux proves that it was composed of coloured blood-corpuscles undergoing a fibroid change, and giving indications finally of calcareous infiltration. In the words of Garel, 'de ce qui précède, nous croyons pouvoir conclure, avec M. Chandelux, qu'il s'agit d'un épanchement sanguin formé dans l'épaisseur des lames valvulaires et subissant les transformations successives qui doivent aboutir à la production de tissu fibreux. Cette tumeur offrant déjà, de distance en distance, des îlots d'infiltration calcaire, nous avons cru devoir la désigner sous le nom *d'hématome valvulaire en voie de calcification et de transformation fibreuse*.'

These two observations open up a new field of inquiry; but it would at present be premature to suggest that intravalvular hæmorrhage may be the starting point of other diseases of the valves. It is, however, quite possible that such may be the case, and further investigations on the subject are required.

As regards the causation of such extravasations, it appears probable that when the valves are subjected to any very severe strain from excessive cardiac action, there will be a tendency to rupture of their vessels, a tendency no doubt kept in check by the density of the fibrous texture surrounding them, but which will at once have full play if, by extreme tension, there should be any weakening of the elasticity of the valves. It must be admitted, nevertheless, as somewhat inexplicable, that both these cases were extravasations into the tissue of the tricuspid valve, which readily yields to an excess of pressure in the pulmonary circulation; and we must wait for future observations.

In the next place, degenerations must be considered; and here we must bring in atheroma, instead of leaving it among the new formations. The subject of atheroma has been so well thrashed, that but small room seemed left for a new labourer; and yet the most recent contributions to this branch of pathology may be said to go beyond all that has hitherto been written on it. In a recent paper, Martin brings forward some new facts of much interest. It is not necessary here to pass in review the various opinions which have been expressed regarding the atheromatous process; it need only be remarked in passing, that two views have been advanced as to the initial stage of the morbid change. The first of these regards the process as being of inflammatory origin, the products of inflammation ultimately undergoing fatty degeneration; and the second considers the change as being from the first a degeneration. In no work dealing with the question, does the causation of the lesion receive consideration.

Martin adopts the view expressed by Cornil and Ranvier, that the first stage is quite passive, and that, in the commencement of the process, the internal tunic exhibits a collection of fat-globules, amongst which may be seen vestiges of nuclei recognisable by their coloration on staining with carmine. To this first period there succeeds a stage of chronic inflammation, according to these authors, set up by irritation through the contiguity of the necrosed part. This opinion is also espoused by Martin.

He begins by considering the relation of cirrhosed viscera to the circulatory apparatus in old age, or chronic alcoholism, where great vascular changes are present; points out that the inner tunic, not only of the arteries, but of the arterioles, and even of the capillaries, is the seat of great hyperplasia; and urges that the visceral changes are consequent upon the vascular thickening, which greatly interferes with the circulation. In a similar way he believes atheroma to be caused.

Little attention has been given to the *tunica externa* by the majority of authors, and thus the immediate cause of atheroma has been left unexplained. It reveals a notable fact. By the deeper aspect of this tunic the nutritive arterioles of the wall of the vessel enter. They are always healthy, with the exception of those which correspond to the atheromatous patch. Opposite that area the nutritive arteriole belonging to it presents proliferating endarteritis, which frequently obliterates the entire lumen of the vessel.

Martin states that this fibrous endarteritis is always present in atheroma, and gives a drawing taken from a case. It seems difficult to contest, as he remarks, the relationship as to cause and effect between the endarteritis and the atheroma in the face of the evidence in support of it; and we are inclined to agree with him in regarding atheroma 'qu'une simple nécrobiose par insuffisance vasculaire'.

It is true that Martin's observations were not made upon the valves of the heart, and therefore do not apply directly to the matter immediately in hand; but, if atheroma of the arterial walls be always caused in this way, it must, beyond all question, arise in a similar manner when it affects the valves. No doubt fatty degeneration of the products of inflammation does occur, but it would be well for the future to separate such a secondary degeneration from primary atheroma.

Amongst inflammatory diseases of valve-texture Rokitansky gives, 1. Redness, 2. Opacity, 3. Softening, 4. Exudations in valves, and 5. Vegetations on valves. The terminations of inflammation of the valves, according to the same writer, are, 1. Thickening, 2. Shrivelling, 3. Adhesion, and 4. Concretion; to which he appends Aneurism of valves. Our business with those changes at present is to investigate their causes.

At the outset, we are confronted by the rheumatic origin of endocardial inflammation. It is an undoubted fact that rheumatism is the most prolific source of such inflammation, but the relative proportion of cardiac to rheumatic affections is uncertain. Thus Bouillaud, quoted by Pierson, states that 80 per cent. of cases of acute rheumatism are complicated by endocarditis. Latham gives a ratio not quite so high; for, on adding up his figures, we find that 54.40 per cent. of his patients who suffered from acute rheumatism had as a sequel inflammation of the endocardium. Fuller, quoted by Hayden, states that, of 379 cases of acute and subacute rheumatism admitted into St. George's Hospital, 174, or 45.91 per cent., suffered from endocardial mischief. On the other hand, Bamberger, also quoted by Hayden, found endocardial affections in only about

20 per cent. of cases of articular rheumatism. Latham says it was suggested to him that perhaps his clinical clerks had brought together more than the usual proportion of 'interesting cases', which might account for the frequency of endocarditis; and Fuller admits that there could be no doubt that many of his cases had only a murmur of relaxation, such as would of necessity arise in any other febrile condition. We are certainly inclined to regard Bamberger's statement as much nearer the mark than either of the other authors. Even it shows the frequency of endocardial sequels to rheumatic attacks.

From the converse of such observations much is to be learned. The writer has recently analysed his cases of valvular disease, in order to discover the relative frequency of the rheumatic origin of cardiac lesions, and the results may be referred to in this place. The total number of cases was 134, of which 51 had personally suffered from rheumatism in some form, and 7 were of rheumatic families; in all, 58 patients had a history of rheumatism. Of the remainder, 34 had a distinct history of entire freedom from rheumatic taint, and 42 had no distinct history at all. Leaving the cases whose history was not attainable out of account, there were 92 patients, 58 of whom, or 63.05 per cent., were rheumatic, and 34, or 36.95 per cent., non-rheumatic.

There is little doubt that exanthematic diseases play a very important part in the production of valvular disease. First in importance amongst these is scarlatina. Thus Hayden says, 'amongst the hæmic causes of disease of the heart, I regard the poison of scarlatina as next to rheumatism in frequency, and perhaps superior to it in potency. It attacks the endocardium by preference, seldom engaging the pericardium, and more frequently the mitral than the aortic valve.' Measles and small-pox likewise frequently induce cardiac mischief, but by no means so often as scarlatina. Septicæmia, it is well known, is commonly complicated by the co-existence of endocarditis especially implicating the valves; and many other blood-diseases are also important but less frequent factors in the causation of valvular diseases, and in this connection the lithic acid diathesis and alcoholism should be considered.

All these causes operate by means of irritant principles contained in the blood. Their action is probably twofold. In the first place the whole organism is in a condition of enfeebled resistance and imperfect nutrition, a state in which the heart must share, and therefore be liable to morbid changes on excitation. Further, the parts directly exposed to the deleterious influence of the vitiated blood are chemically or mechanically irritated by them and become inflamed. Moreover, in alcoholism at least another factor is always introduced. This is excessive action of the heart, involving an extra strain on the valves. It does not seem to us that simple malnutrition has been proved in any case to be a cause *per se* of valvular disease, except in conjunction with this last mentioned factor, strain on the valves. We shall, therefore, glance next at it.

The aortic valves very frequently suffer in men who are engaged in occupations requiring great muscular effort, especially when this is associated with compression of the chest, much additional strain being in this way thrown upon the systemic valves. On this subject, Allbutt's views command in the main our unqualified assent. Such cases are of frequent occurrence in those districts where the major operations of the iron and similar trades are carried on. In this place we may recall the observation of Adams, that the valves of the left side of the heart suffer, on account of their more perfect closure, infinitely more than those of the right side, which yield to exaggerated pressure, and therefore escape many evils.

Bright's disease in its chronic form is in a large proportion of cases accompanied by cardiac changes. The hypertrophy is no doubt due to arterial and capillary resistance, but the valvular lesions are probably in part due to the changes in the blood, which must induce a certain amount of malnutrition of the valves. According to Roberts, of 406 necropsies of renal disease, 54 showed valvular disease, that is 13.30 per cent. This we regard then as one disease which induces valvular lesions, partly by interference with nutrition, and partly by increased strain on the valves. Anæmia must be placed in the same category. This affection not infrequently induces valvular disease as a sequel to its other cardiac phenomena. Probably, in some quarters, this statement will be received with incredulity; nevertheless, we are positive on the point. In this belief we are strengthened by the opinion of Goodhart to the same purpose, but we differ from him somewhat in the interpretation of its causation. In his own words, Goodhart thus gives his view as to the anæmic origin of valvular disease. 'Anæmia leads to fatty changes in the heart. Fatty changes in the heart favour dilatation of the left ventricle. Dilatation of the left ventricle disarranges the coaptation of the mitral flaps, and mitral regurgitation results, the so-called curable regurgitation. But if this regurgitation is prolonged for any length of time, or is frequently repeated, as is not unusually the case in many instances of chlorosis, surely from the passage of blood in two directions instead of one, and particularly when the backward stream is such a twisted and rough stream, if I may use such a term, of fluid, as is the regurgitant mitral stream, there must be a considerable increase of friction or wear and tear to the valve, and chronic disease of the tissue of the valve is started, which by and by—it may be years after the original cause had ceased—leads to permanent thickening and disease of the valve.'

It seems to us that a better explanation of the occurrence of valvular disease in anæmia lies in the two facts, that in this affection there is impairment of nutrition, and therefore a proneness to changes in all organs; and further, that in addition there is increased resistance to the circulation from a lowering of the *vis a fronte*. When the blood is not supplied with the material required by any particular tissue, that tissue exerts less power of attraction for the blood. The diminution of the attractive force of the tissues in anæmia has recently been insisted on by James, in a paper lately read, but not yet published. It seems highly probable that it greatly assists the malnutrition in causing valvular lesions. This subject would be far from complete, if no mention were made of heredity in connection with valvular disease. Recently, two observers have brought forward facts in support of a transmission of tendencies to valvular lesions from parent to child. Leube puts before us very clearly the intimate relationship which rheumatism, chorea, and organic cardiac affections bear to each other; while Pierson brings forward a series of cases in which he observed the inheritance by children of the parent's predisposition to valvular disease. The latter author quotes Wunderlich's opinion that the older physicians gave

too much weight to such a heredity, and the new attribute too little importance to it.

It seems to us that many of the cases of valvular disease apparently arising from anæmia really spring from some inherited tendency; for, in our experience, it has been a common observation that two or more sisters have suffered from the same insidiously developed cardiac trouble. In almost all of these anæmic patients, the mitral valve was the one affected. Several of these seemed to be free from any rheumatic taint, but in many of those from whom no definite history, except as regards themselves, could be obtained, it is at least possible that there may have been a family history of rheumatism, or of endocarditis, which, as Friedreich says, may be regarded as a sort of rheumatism.

Taking leave now of the diseases of valves, we have lastly to consider their injuries. From Harvey's time, ruptures of the cardiac substance have often been placed on record, but, so late as the days of Haller, no injuries of the valves were known. In an extensive and comprehensive memoir which has only lately come out, Barié places these facts before us, and gives a brief *résumé* of all the published instances of valvular rupture, to which he adds seven unrecorded cases. He shows that the earliest trustworthy observations are those of Corvisart, and cites in succession the experiences of Bertin, Laënnec, Bouillaud, Henderson, Aran, Peacock, and Foster; after which he analyses the cases, and finally describes a series of experiments on the mode of production of valvular ruptures. He divides these injuries into two classes—the spontaneous, caused by effort on the part of the patient; and the traumatic, in which the injury arose from an external agency.

The total number of cases is 38. Of these, 19 affected the aortic valves, 10 of which were spontaneous, and 9 traumatic. In 11 of the aortic cases necropsies were obtained, and it was found that 6 had rupture of two valve-segments, while 3 had but one segment injured. The segment most frequently damaged was the right or that next the interventricular septum. The mitral apparatus suffered in 16 cases, of which 13 were spontaneous, and 3 traumatic. Necropsies were performed in 15 of these instances; 9 showed rupture of the tendinous attachments of the valves, 5 laceration of the muscular columns, and 1 injury both to chordæ and to columnæ. In no case was there any damage to the valves themselves. There are three cases of injury to the tricuspid apparatus, 2 spontaneous and 1 traumatic. In these cases, once a valve was damaged, once the fleshy columns were torn, and once also the tendinous attachments gave way. Now in the whole series it is quite evident that spontaneous rupture is more frequent than traumatic, their numerical relationship to each other being 25:14. The causation of the spontaneous ruptures was found in great muscular efforts at work, the strain of a bad cough, or frantic attempts at respiration when suffocation was imminent. The traumatic ruptures were partly due to direct, and partly to indirect violence.

Barié has given considerable attention to the pathogenesis of these ruptures, and thinks that the surest key to their solution lies in a study of the physiological mechanism of violent efforts. Right-sided rupture is brought about in this way; every effort raises the pressure in the pulmonary circulation, and therefore increases that of the right cardiac cavities. If at that time any violent strain, such as coughing, be induced, and simultaneously ventricular systole occur, the tricuspid valve may gave way. To us it seems that there must be some tricuspid peculiarity before rupture could occur, as the usual course is that free regurgitation sets in when the pulmonary pressure rises; it is, however, quite credible that the tension of the whole thorax in certain rare instances may keep the heart from any excentric yielding. The valves of the left side are believed by Barié to undergo rupture by means of augmented pressure, due partly to peripheral resistance, and partly to increased tension on the thoracic and abdominal aorta during great effort. He thinks that traumatic rupture of the tricuspid and mitral apparatus occurs during the diastolic period, just when the ventricles are nearly or quite full, and before the sigmoid valves can open to the sudden and great increase of pressure. In the same way, he considers that rupture of the aortic segments must be caused during diastole also, when the aorta is fully distended, and no escape can be found save by an abnormal channel.

Experimentally, Barié found that it was impossible to cause rupture of the pulmonary valves, and the same may be said of the tricuspid; for the only instance of injury which he was able to produce occurred in the case of a woman, aged 79, who died in the last stage of cancerous cachexia. The mitral valve was difficult to rupture; the easiest of all being the aortic. In this last it is interesting to note that the segment which most frequently yielded was the right, or that of the interventricular septum.*

KNOTT AND WALSHAM ON ABNORMALITIES IN HUMAN MYOLOGY.

MR. KNOTT'S paper (read before the Royal Irish Academy, April 1881) is a record of observations made during four winter sessions in the school of the Royal College of Surgeons of Ireland, to which the author is demonstrator. It includes anomalies of muscles in every part of the body, and, together with 'Anatomical Variations' (Walsham, *St. Bartholomew's Hospital Reports*, Vol. xvi, 1880), the result of work occupying a similar or rather longer period, and appearing almost simultaneously, will be an useful store of reference, which anatomists must not allow to fall into oblivion. The homologies of the upper and lower extremities constitute one of the most intricate questions of morphology, the solution of which has hitherto been looked on as among the special amusements of a few very learned anatomists. Until more

* Rokitansky. *A Manual of Pathological Anatomy*, Sydenham Society's Translation, vol. iv pp. 225-242. 1852.—Peacock. *On Malformations, etc., of the Human Heart*, p. 93-102. 1858; and on some of the causes and effects of Valvular Disease of the Heart, p. 2-33. 1865.—Garel. *Revue Mensuelle de Médecine et de Chirurgie*, tome iv, pp. 864-874. 1880.—Burns. *Observations on some of the most frequent and important Diseases of the Heart*, pp. 194-197. 1809.—Gairdner. *Clinical Medicine*, pp. 602, 603. 1862. Specimen demonstrated at the Meeting of the British Medical Association. 1873.—Gibson. *Journal of Anatomy and Physiology*, vol. xiv, pp. 413-415.—Martin. *Revue de Médecine*, tome i, pp. 32-37. 1881.—Latham. *Lectures on subjects connected with Clinical Medicine, comprising Diseases of the Heart*, vol. i, pp. 143-145. 1845.—Hayden. *The Diseases of the Heart and of the Aorta*, pp. 303-324. 1875.—Gibson. *Birmingham Medical Review*, vol. x. 1881.—Allbutt. *St. George's Hospital Reports*, vol. v, pp. 23-53. 1870. And *Transactions of the Clinical Society of London*, vol. vi, pp. 101-113. 1873.—Adams. *Dublin Hospital Reports*, vol. iv, pp 353-453.—Roberts. *A Practical Treatise on Urinary and Renal Diseases*, 3rd edit., p. 413. 1876.—Goodhart. *Lancet*, vol. i, pp. 479-482. 1880.—Leube. *Deutsches Archiv für klinische Medicin.*, Band xxv, s. 242-258. 1880.—Pierson. *Separat-Abdruck aus dem Jahresberichte der Gesellschaft für Natur und Heilkunde in Dresden*. 1880-1881.—Friedreich. *Handbuch der speciellen Pathologie und Therapie*. Band v, Abth. ii, s. 207. 1867.—Barié. *Revue de Médecine*, vol. i, pp. 132-144, 307-332, 482-492. 1881.

facts concerning the muscles of the extremities are known, the arm and leg can never be studied from a developmental point of view, in so satisfactory a manner as the cranium, or even the pelvic and shoulder girdles. Mr. Knott furnishes us with a collection of such facts. As his monograph, if we can apply this familiar scientific expression to a work that includes so much, gives details of 155 abnormal muscles and variations in normal muscles, we can only notice a few points of interest. It will be convenient to compare Mr. Knott's conclusions with those of Mr. Walsham, since the latter is the author of the most recent paper on the subject next to that now under consideration, and both anatomists have freely quoted earlier authorities.

Masseter.—Mr. Knott has examined thirty subjects to find the bursa described by Monro as lying between the two parts of this muscle, but without success. He has met with several examples of Hyrtl's bursa, which lies between the muscle and the capsule of the temporo-maxillary articulation.

Sterno-cleido-mastoideus.—In eleven examples, it was found to be entirely divided into sterno-mastoid and cleido-mastoid. In five cases, the outer edge of the sternal head gave origin to an accessory tendon of the pectoralis major.

Omo-hyoid.—This muscle has been the subject of considerable attention. Mr. Knott, in four years, has found seven cases of the origin of the posterior belly from the coracoid process. In one, it arose from the acromion process. In none was its origin traced to any part of the first rib. In two, this muscle arose from the clavicle alone. Walsham calls this a very common abnormality; both find, in this case, that the intermediate tendon is reduced to a mere intersection. In two cases, the anterior belly was observed to be double; on the other hand, Walsham found the posterior belly double in one subject.

The intrinsic and external muscles of the larynx have been found subject to numerous anomalies, described at length by Mr. Knott. Want of space forbids our discussing either these abnormalities or those of the muscles of the neck. Both Knott and Walsham have found a levator claviculæ, the former recording two cases where it was attached superiorly to the transverse process of the sixth cervical vertebra (*cleido-cervicalis imus*), one where the attachment was to the axis (*cleido-epistropheus*), and one where the muscle broke into slips inserted into the articular processes of the third, fourth, and fifth cervical vertebræ. Walsham has found one instance of its attachment to the atlas (*cleido-atlanticus*); but in this case its lower attachment was much nearer the sternal end of the clavicle than usual.

Mr. Knott has examined, with great care, the anomalies of the biceps brachii, and the innumerable variations in the flexor and extensor muscles of the fingers. He has found one instance of an extensor brevis digitorum manûs; it arose from the bases of the second and third metacarpal bones, and took some fibres from the adjacent part of the posterior annular ligament, giving off two tendons which joined the long extensor tendons of the index and middle fingers. Mr. Walsham also describes one case of the existence of this muscle, arising from the dorsal ligament of the carpus and inserted into the tendon of the extensor communis digitorum to the index finger. Mr. Knott has found instances of a third head of the gastrocnemius, arising from the popliteal surface of the femur, and five of accessory fibres of the outer head arising from the external lateral ligament of the knee-joint.

Alban Doran.

COLOUR-HEARING.*

He who has never heard the expression 'colour-hearing', will hardly find his curiosity satisfied if he look for it in a dictionary, for it is a newly formed word, which may be employed to describe a peculiar phenomenon (whether psychological or physiological cannot as yet be determined), and to an illustration of which the following may contribute.

As a rule, we do not hear colours, since they make an impression only upon the sense of sight. Nevertheless, it is possible to hear colours. Nussbaumer was the first who, in an article published in the *Wiener Med. Woch.* of 1873, stated that, in his experience, hearing of musical notes, articulate sounds, and noises of any kind, were always accompanied by an appearance of light and colours, in such a manner that each special note seemed to be connected with a special colour. These observations he made while still a youth, and corroborated them by a similar talent possessed by an older brother; for in their mutual play with 'bells' (spoons and forks suspended by a thread, and which by striking were caused to clink), they detailed to one another the observation of colours caused by the hearing of sounds, these experiments being a great source of amusement to them. Nussbaumer described this unusual state of affairs, namely, a single sense, hearing, possessing the functions of two. But not knowing of another case of colour-hearing besides himself and his brother, whose perception of colours coincided in substance with his own, this peculiar talent would have been looked upon as unique, had not lately a large number of investigations, accurately pursued, established the fact of its wider distribution. A student of medicine at Zürich, not acquainted with the published account of Nussbaumer, stated in a circle of acquaintances, that while hearing he perceived colours, and this gave an impulse to further investigations. The 'colour-hearer', Bleuler, associated with himself a colleague, Lehman, who only heard a tone, and was hence not possessed of the 'Doppelwahrnehmung' (double perception). Lately, they published the result of their investigations and observations in regard to themselves and a large number of well-known individuals. By these researches, the communications of Nussbaumer were verified in all their details, and explained more extensively.

They explain the sensation as follows. The perception of musical notes is connected with the observation of certain colours, which differ, however, in character in different individuals. As a general rule, the higher notes are accompanied by lighter colours, the deeper, in their turn, by corresponding darker colours. Chords either cause the colours which correspond to the different notes (of the chord) to appear side by side, or a result obtained from a mixture of these colours. In one case, a certain scale, so arranged that the key could be recognised, was followed by the perception of only one colour. This individual, who is moreover a thorough musician, perceives with each key a distinct colour; for example: C major, grey; G flat major, reddish-brown; A major, blue; A minor, lead

* *Medicinische Neuigkeiten*, and *Cincinnati Lancet.*

colour; F sharp major, yellow, etc. The key in sharp is always lighter, and the key in flat darker, than the key in natural. Within a key itself the notes appear of the same colour, but the same note, in different keys, changes in colour according to the colour of the key in which it is found; thus, a note which is a part of the cord in D major is yellow, while the same note as a part of a chord in C major appears grey. A piece of music appears to this individual of an orange colour as long as it is composed in F major, but changes its colour as soon as there is a transition into another key. To many persons, the same piece, played by different instruments, appears also in different colours. The same individuals who perceive colours while hearing musical notes also observe these accompanying noises; these are generally of a grey or brown hue. The intensity of the sound in a noise has more influence upon the colour than in musical notes; since, in the latter, the greater the intensity, the more intense is also the colour, which, however, retains its hue; while, in the former, it takes away to a great extent the transparency, giving place to a more opaque appearance. 'A hissing noise', is said, by way of explanation, 'presents, if slight, an image of light grey vapour, evenly distributed; but should the noise assume a very loud character, the colour of the image may be compared rather to a mass of rough silver.' As an answer to the question, where the colours observed appear to be localised, the investigators express as their opinion, that 'the colour images are projected outward, but not analogous to a hallucination into the field of vision, but into the auditory field'. The examples, however, which are offered as a proof of this assertion, directly contradict it. For, when they say that, a guitar being employed, the tone and colour-image surround the strings which are touched, or when they represent the colours of tones emitted by the piano as arising somewhat behind the keys of the instrument, the exhibition of colours is surely not in the auditory field.

The result of sounds produced by speaking is similar to that from musical notes and noises. Vowels, as musical notes, summon forth the intense colours; consonants, as noises, the different shades of grey and brown. As a result of the investigations it has been shown that, as a rule, those individuals who connect colours with musical notes, combine them also with musical sounds; in fact, the number of those who possess the latter power is greater than of those who possess the former. Yet here, also, they agree only in one regard, namely, that the higher vowels, *i* and *e*, are accompanied by the lightest colours; *u*, as the deepest vowel, by the darkest colours; *a* and *o*, as middle vowels, by the intermediate colour. The separate colours are not distributed alike by all persons among the different vowels. A synopsis shows that *i* produces, as a general rule, white; *e*, yellow; *a*, dark blue or black; *o*, red, yellow, orange, etc.; and *u*, black. Whoever should so be disposed, could very easily assume that the vowels occurring in the name of the colour exercised some influence, so that, perhaps, *e* should appear yellow, because *gelb* (yellow) has *e* for its vowel. This assumption finds further support in the fact that in the German, as spoken in Switzerland, which dialect was to a great extent current among those upon whom the tests were made, the diphthongs of the high German names of colours are displaced by long vowels; viz.: 'wiss' instead of 'weiss' (white); 'brun' instead of 'braun' (brown); and hence it would be very natural to appoint white as the colour of *i* (which occurs both in 'wiss' and 'weiss'). The two investigators, however, protest against the exclusive acceptation of this view, which can certainly not explain directly all the phenomenon; hence, let this so plausible a criticism be treated only as a suggestion for the present. Diphthongs frequently only produce one colour, a mixed one. This mixture results, with hearing, more rarely with the orthography as a basis; for example, *eu* is green; *e* would be white; *u* red; that is, the colours of the separate vowels do not unite to form 'gruen' (green), while, on the other hand, the vowels *u* and *e* (eu) combined, are found as the vowel of 'gruen'. *Oe* is dark green, *ei* light green, and *ue* violet. In singing, colours are produced, both according to the vowels and pitch of notes. Words act in a similar manner. They give either a band of various colours, which correspond to those of sounds placed side by side, or a mixed colour. The colours of the vowels, however, preponderate when compared with those of the consonants. Names of persons, months, days, and numbers, frequently create a combined perception of colours and sounds in persons who otherwise do not possess this faculty. But the authors themselves are compelled to grant that, in this case, frequently, direct 'association' is evidently a cause. Sentences and discourses generally appear grey and brown in colour mixtures. Probably a still more interesting fact, which corresponds to the phenomena hitherto considered, but which has been observed only in four persons, is the production of sound as a result of sensations of light and colour. Let the following act as an illustration. The sound perceived, as it is produced by a broad quietly burning gas-flame, may be constructed of a *w* and a light vowel, the latter approaching nearest to *e*. Should the flame be caused to flicker slightly by a draught of air, the noise will grow similar to *l*; vibrating still more rapidly it assumes a character which might be called blowing. May not association in this instance also be considered plausible?

Remember the hissing noise that caused a colour similar to vapour, which condensed itself into rough silver whenever the sound grew more intense. Colours are observed similarly combined with the impressions received by the sense of smell and taste, as well as with those received by the sense of touch; but here, also, association may be suspected. To offer only one illustration: An individual who was inhaling the odour of an acacia in full bloom, upon being asked what the character of the scent was, remarked: 'It is only a green sort of odour.' Let one conceive this association fixed, and the phenomena are explained. Let, from youth on, each sound be compared to a certain colour (in consequence of the varying excitability of the senses, especially of sight); then without doubt a certain fixation will at length take place, which talent may even be inherited. Hence, the investigators appear over-zealous when they do not admit association as an explanation of definite phenomena, because they observed also less constant associations, which encroached upon this view, but which could perhaps be neglected. A connection in this double perception has been found constant in all cases examined. Invariably the same primary (original) sensation was followed by the same secondary (accompanying) sensation in the same individual; but the combination did not occur alike in different individuals. The organ of secondary perception was never influenced; for example, nothing could be perceived in the eye

when a sound excited colour; at least, the authors say so. A little doubt must here be allowed. The sense, which was acted upon secondarily, must have been influenced in some manner, since we know by experience that each sense possesses a specific energy. Here, also, criticism is compelled to reproach the experimenters for speaking of secondary observations of impressions received without proving them to be such. The question might be justly asked, why in the report submitted the neutral word 'Wahrnehmung' (perception) was purposely used instead of 'imagination', which would perhaps be a more warrantable term? The same consideration also leads us to a correction of the authors' idea that the secondary observation, or perception, is localised within the field of that sense upon which the impression was primarily made. All arguments brought forward by the authors against the explanation by means of association are proven to be fallacious by the important established fact that the phenomenon under consideration is to a great degree hereditary, in such a manner that either all members of a family or not one of them possess this 'doppelwahruehmung'. No essential difference between the two sexes has been demonstrated. Of seventy-six serviceable persons, 59 per cent. were male, and 41 per cent. were females. The serviceable ones, again, represent only a small proportion of those examined: 12.5 per cent. of 596 individuals who were placed at the disposition of the authors. Since the number is so small a fraction, this peculiar state must be considered pathological. It cannot be called disease, as it occurs without any direct disturbance of the organism; yet it may be concluded that there probably exist anomalies of various kinds caused by a predominant sensibility of the secondary function. As far as this is concerned, Bruehl correctly refers it to an error of the mind, although this reference does not exhaust all the results, and, on the other hand, the least number of results may be traced to errors of the mind. This subject, moreover, offers to the psychologist substance for manifold suggestions, since it has already attracted considerable attention.

GRASSET AND AMBLARD ON EMETINE AND ATROPINE: THEIR ACTION CONTRASTED.

Notwithstanding the increasing interest which now attaches to this kind of research, M. Mollière observes (*Lyon Méd.*, p. 421), that nothing, or nearly nothing, has been done up to the present time on the comparative action of emetine and atropine on the heart and circulation. Podwyssotzki has touched the question in pointing out that emetine arrests the heart in diastole, and that neither mechanical excitation nor atropine can arouse again its extinct contraction.

To appreciate accurately the reciprocal action of a few alkaloids in the presence of each other, or in other words, the antagonism which was previously necessary to ascertain the separate action of each, it was necessary, as a preliminary, to know them well separately. In 1862, Pecholier first demonstrated the very marked action of emetine on the cardiac contractions, of which it first diminished the intensity, and in the end completely stopped them. Some years later, Dyce Duckworth showed that large doses of emetine injected under the skin, or into the veins, produced cardiac paralysis; the blood-pressure, which was but little modified by small doses of the alkaloid, suddenly fell a few moments before death. In the opinion of Ornellas, as well of Podwyssotzki, the capital fact of poisoning by emetine consists in this gradual diminution of the cardiac contractions, commencing by the auricles, and finishing by the ventricle, which is stopped in diastole. Thus it is difficult for them to say whether the paralysis of the heart is due to an indirect action on the nervous ganglia, or on the muscular fibre itself.

M. Grasset seeks to elucidate the question by employing in turn the hypodermic method and the direct applications of the poison to the heart. What is most interesting in the effects of emetine, is the course of the slackening. Sometimes the outset of the poisoning is marked by a temporary acceleration; but whether this phase exist or not, a progressive slackening soon occurs.

The principal phenomena which these experiments show is the very rapid fall which emetine produces in the number of pulsations, which are lessened by half, and do not sensibly vary up to the end. This fall may be produced by doses, which vary according to the animals. The dicrotism of the systole and of the diastole must be noted, as well as the character of the contractions, without reference to the number of pulsations. As concerns atropine, M. Grasset has naturally aimed at the immediate effects of moderate doses, repeated or not at variable intervals, without producing death. It is known, indeed, that doses which are somewhat high immediately produce arrest of the heart, without permitting the study of the modifications of the contraction.

From the comparison of these phenomena with the observations on emetine, it follows that the effects of atropine are rather those of emetine in an attenuated form than opposed to them. This phenomenon, however, observed in frogs, appears to be the reverse of that which occurs in higher animals, in which belladonna, and especially atropine, produces an enormous acceleration of the pulse. Nothing, therefore, in these observations on frogs indicates beforehand the possibility of an antagonism between the two alkaloids. This antagonism itself is difficult to determine, and it is only by very carefully establishing the necessary experimental conditions that it is possible to demonstrate it.

The conclusions appear to be that the acceleration is indeed only temporary. When the heart's action is slackened by a subcutaneous injection of emetine, the atropine introduced in the same way may re-accelerate it suddenly, but after a relatively long time. Finally, if it be desired to demonstrate the antagonism of emetine and atropine in an evident manner, emetine must be injected under the skin, milligramme by milligramme, until the sudden characteristic slackening of the heart is produced. If at this moment a very small portion of concentrated solution of sulphate of atropine be applied to the heart, a very remarkable re-ascent of the course of pulsations is produced; and what proves that these two actions are closely connected one with the other, is that, when a primary instillation of atropine has accelerated the pulse, slackened by emetine, and when its action is exhausted, and the pulse returns to its normal figure, it is in vain again to apply atropine; no acceleration is obtained. Atropine has, then, in relation to emetine, an action analogous to that which it exercises in relation to

muscarine and pilocarpine, as shown by the experiences of MM. Schmiedeberg, Kopp, and Vulpian.

Finally, whilst atropine is powerless to accelerate the heart of a healthy frog, it produces its results in an animal whose pulsations have been slackened by emetine.

So true it is, says the author, that the therapeutic action of the medicine (that is, its action on diseased organism) cannot be always deduced from the physiological action (that is, its action on a sound organism).

These facts demonstrate also that various medicinal substances have modes of absorption essentially different, and that it is necessary to take seriously into account these various conditions when negative results have to be considered.

HANSEN ON QUEBRACHO BARK.*

EARLY in the year 1878, a collection of vegetable drugs was sent by Herr F. Schickendanz from the Argentine Republic to Erlangen for investigation and examination. Among these was a bark which has since attracted considerable attention.—*Aspidosperma Quebracho.* The tree is common in the province of Santiago, and grows abundantly in the valley in which the city of Catamarca is situated. It belongs to the Natural Order Apocyneæ, and was named by Schlechtendal. The bark has long been employed as a febrifuge, and according to the physicians of Tucuman is equal to the cinchona barks in activity. Its chemical examination by G. Fraude at the Munich laboratory (G. Fraude, *Berichte der Deutsch. Chem. Gesel.*, 1878, p. 2189; 1879, 1558, u. 1560) resulted in the extraction of its alkaloid, whilst its clinical investigation by Dr. F. Penzoldt (*Berl. Klin. Woch.*, 1879, iv, 19) showed that it possessed valuable properties in the treatment of dyspnœa. These investigations resulted in a great demand for the drug, of which only a small supply could be obtained. The limited knowledge regarding its botanical source gave rise to much confusion, and also to some variation in the parcels brought into the market. This difficulty was increased by the fact that, in its native country, species of entirely different families received the popular name of 'Quebracho'. The word itself is derived from 'quebrar' and 'hacha', signifying 'breaking the axe'; and trees with very hard wood commonly receive this designation without regard to their botanical relationship.

The true Aspidosperma Quebracho is a tall tree, with a perfectly straight trunk from two to three feet in thickness, having a moderately large oval crown and sparse foliage, the extreme twigs being fine and pendant, as in the willow. The leaves are in triple whorls, they are leathery, lanceolate, entire smooth, and end in a sharp-pointed thorn. The flowers are arranged in cymes. The bark, as met with in commerce, is obtained from trees usually averaging from seventy to eighty years of age. The pieces have a thickness of from 20 to 30 millimètres. Quebracho bark is distinguished by the great development of the corky layer, in proportion to the entire dimensions of the bark. This corky layer makes such inroads into the tissue, that in most cases half and frequently more of the entire substance of the bark consists of this layer. The identification of the bark is a comparatively easy matter, inasmuch as it bears no resemblance to any other bark used in medicine.

[Dr. Hansen's paper is accompanied by a number of beautifully executed lithographic figures, illustrating the microscopical characters of the bark. His essay is a valuable contribution, and must long remain the standard authority on the subject. An excellent specimen of quebracho was exhibited at the International Medical and Sanitary Exhibition by Messrs. Burgoyne, Burbidges, Cyriax, and Farries, as agents for Messrs. Parke, Davis and Co. of Detroit.—*Rep.*] WILLIAM MURRELL, M.D.

* On Quebracho Bark, *Botanic Pharmacognostic Essay.* By Dr. Adolph Hansen (Assistant at the Botanic Institute of Erlangen).

GAUTIER ON THE ALKALOIDS DERIVED FROM PROTEID MATTERS UNDER THE INFLUENCE OF FERMENTS.

IN a short historical account, the writer gives the methods which he used in 1872 to extract the alkaloids which form in the albuminoid matters putrefied by contact with the air, and calls to mind how Selmi reached contemporaneously the same results by different ways. He then describes the principal chemical and physiological notions we have on that subject, such as have especially resulted from the researches of Selmi and his pupils. He also points out, according to his own views, the analogy of these ptomaines with some very poisonous vegetable alkaloids, analogies which are sometimes so marked that they may lead toxicologists into serious mistakes. But, as MM. Giannetti and Corona have well pointed out, most of these poisons act profoundly on the heart and the muscular contractility, so that after death the application of induction-currents to the muscles does not arouse contraction. This physiological reaction is almost characteristic of these substances.

Nevertheless, the researches and observations relating to the so-called cadaveric alkaloids had only a purely toxicological importance until a few months ago, when they acquired, in M. Gautier's judgment, a much higher and more general interest, through his having found that, far from being substances of exclusively cadaveric origin, they are normal and necessary products of the disassimilation of animal tissues. He says that he has extracted venom of serpents from the human saliva, and has found in normal urine very poisonous alkaloids, in all points analogous in their chemical and physiological properties to those which are extracted from albuminoid matters which become putrefied. Sometimes it is the glands of the mouth, sometimes the liver, the skin, or the cutaneous organs, which normally secrete these poisons in some animal species. But it is possible always to obtain, from the secretions and normal excretions of the higher animals, substances in all points comparable to those which were believed to be only derived from the action of bacteria on putrid matter. These toxic substances are therefore necessary products of the life of our tissues, constantly excreted in small quantities, and partially destroyed in the organism itself, especially under the beneficent influence of respiration. All disturbances in secretion and normal excretion, every arrest or diminution in the respiratory function, or in the blood-making process, is necessarily followed by pathological actions, which become generalised by the nerve-centres.

Though oxygen seems to penetrate into us at all points, some of our cells seem to live in a putrefactive manner, in the same way as the anærobic

ferments. M. Gautier demonstrates this in his memoir by two proofs. In the first place, he says, our secretions contain all the substances which have hitherto been met with in proteid matters submitted to putrefaction. In putrid products, however, urea is wanting; but it is known that many ferments transform it into carbonate of ammonia, and this is always found abundantly in putrefied matters. On the other hand, if, according to the experiments of Pettenkofer and Voit, the quantity of oxygen respired and rejected under all forms by one of the higher animals be calculated, it is found that a part of the food and of the tissues has become destroyed without the intervention of external oxygen, that is to say, by the putrefactive process. It therefore follows, from certain points of view, that we are, even in health, in an active condition of putrefaction.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. Da Costa.—On the Fluorides in Medicine. (*Arch. of Med.*, June 1881.)
2. Christy.—New Commercial Plants and Drugs.
3. Sorel.—On Treatmeut of Œdema of the Glottis by Pilocarpine. (*Jour. de Méd. de Paris*, p. 490.)
4. Cornilleau.—On Oxalate of Potash for Diphtheria. (*Ibid.*, p. 492.)
5. Rogers, J. G.—The Therapeutic Uses of Ergot in Nervous Diseases. (*New York Med. Record*, Oct. 27, 1881.)
6. Chalot.—On Intradermic Ignipuncture as a Radical Cure of Moderate Eczema. (*Paris Méd.*, Nov. 1881.)
7. Verneuil.—On Galvanism in Coxalgia. (*Journ. de Méd de Paris*, p. 494.)
8. Melsens.—On the Treatment of the Bronchial Affections of Pulmonary Phthisis by Ammoniacal Inhalations. (*Bull. de l'Acad. Belge et Paris Méd.*, Oct. 22, 1881.)
9. Vidal.—On Turpentine Compresses. (*Gaz. Heb. de Méd. et de Chir.*, Nov. 4, 1881.)
10. Testa.—On the Toxic Action of Santonine. (*Il Morgagni*, 1881 ; *Lyon Méd.*, Oct. 9, 1881.)
11. Chéron.—On the Use of Effervescent Draughts containing Bromide of Potassium in Nausea, Vomiting, and Uterine Affections. (*France Méd.*, Oct. 1, 1881.)
12. Gibson.—On Sea-Sickness. (*Brit. Med. Jour.*, 1881, p. 662.)
13. Prior.—The Treatment of Diabetes Insipidus. (*Lancet*, Oct. 1881, p. 662.)
14. Atkinson.—Nitrite of Amyl and Nitro-Glycerine in the Treatment of Toothache. (*Practitioner*, Oct. 1881, p. 265)
15. Murrell, W.—On Resorcin. (*Med. Times and Gaz.*, Oct. 1881, p. 486.)
16. Williams, A. Wynn.—On Tannin in Diphtheria. (*Brit. Med. Jour.*, Oct. 1881, p. 654.)
17. Young, P. A.—On Iridin in Gall-Stones. (*Brit. Med. Jour.*, Oct. 1881, p. 694.)
18. Saundby, Robert.—On the Treatment of Consumption. (*Practitioner*, Oct. 1881, p. 249.)

1. *Da Costa on the Fluorides in Medicine.*—Dr. Da Costa's observations (*Arch. of Med.*, June 1881) were made with potassium fluoride, sodium fluoride, ferrous fluoride, and ferric fluoride. They were all made from the purest attainable hydrofluoric acid, and in silver vessels. Some samples of acid contain traces of lead, and this renders great care in the selection necessary. To be certain of purity the commercial acid should be re-distilled, or made in silver or platinum vessels. The potassium fluoride was obtained by simply saturating the hydrated fluoric acid with potassium bicarbonate, and evaporating to dryness. A deliquescent salt results, soluble in three parts of water, and having a not unpleasant saline taste. It is insoluble in alcohol, and is precipitated by it from aqueous solutions. When concentrated, it dims glass. The sodium fluoride is prepared in the same way, substituting sodium bicarbonate for potassium bicarbonate. The salt is very slowly soluble in about twenty-five parts of water, and is infinitesimally dissolved by alcohol. The taste is purely saline, very much like sodium bromide, and even less disagreeable. From the weakness of the solution, it dims glass but slightly on long standing. The ferrous fluoride is made by dissolving iron in the warmed acid to saturation. By evaporating at a gentle heat, a yellowish-white salt is obtained, slowly soluble in about eight parts of water. It is permanent, and has a sharp styptic taste. Ferric fluoride is obtained by dissolving freshly precipitated hydrated ferric oxide in the acid to saturation, and evaporating. It is a light brownish-yellow salt, slowly soluble in about twenty parts of water, and having a sweet, mawkish taste. These salts were administered in the form of elixirs, made with rectified spirit and oil of bitter orange and of cinnamon; or as syrups, made with syrup or orange flowers. The first observations were made with the sodium salt; but its use was speedily abandoned, as even in three-grain doses it produced nausea, vomiting, thirst, and a burning pain at the epigastrium. The potassium salt was given, in doses of five grains every three hours, to two cases of subacute rheumatism. It produced a most decided effect on the pain without causing drowsiness or exerting any influence on the temperature. The urine was increased, and the specific gravity lowered; but this may have been owing to the greater amount of water taken in consequence of the thirst. In larger doses than five grains the medicine is apt to be an emetic, and from ten to twenty grains will in most people quickly cause vomiting, with a moist skin, and a slightly reduced pulse, though without subsequent depression. Professor Da Costa considers that there is no prompter emetic than fluoride of potassium given in these doses. The stage of nausea is always short, and is frequently absent. It was found that the preparations of iron were not very satisfactory. The ferric fluoride in two-grain doses gave rise in four or five days to anorexia and nausea. The ferrous fluoride was agreeable to take, but could not be continued long, as loss of appetite, gastric uneasiness, and sometimes nausea, interfered with its use. Dr. Da Costa is convinced from his experience that, although the fluorides may possess some properties of value, their applicability in medicine and their therapeutic use will not be great. [Hydrofluoric acid has been used by Mr. Macnamara of the Westminster Hospital in the treatment of goître.—*Rep.*]

2. *Christy on New Commercial Plants and Drugs.*—Mr. Christy's papers are always interesting, and we certainly owe him a debt of gratitude for the untiring energy with which he supplies us with new plants and drugs. We have no sooner investigated one than he has half a dozen others ready for us. Some, such as chaulmugra oil, quebracho bark, menthol, damiana, Jamaica dogwood, papaw, duboisia, and coca, are old friends, and are familiar enough by this time; but others, such as go-siu-ju, hak-tau-au (*Anemone cernua*), han-ge, kuh-shing, and mahng dah-rah-gay (*Datura alba*), are quite

new, and have all their troubles before them. The kola-nut tree, judging from Mr. Christy's description, should be an interesting drug. It is a native of tropical Africa, and so highly are the nuts valued that the presentation of a few, or even one, is esteemed a high compliment, and when given by a chief to a white trader conveys an assurance of welcome, friendship, and protection. Where the nuts are not indigenous, no business can be transacted without a few of them being previously eaten, and no marriage gift of the bridegroom to the father would be deemed acceptable for the purchase of his daughter, unless it comprised a considerable amount of the kola seeds. Although slightly bitter, and astringent, strangers quickly become accustomed to the taste, and the habit of chewing the nuts soon becomes an imperative necessity. They support the strength, allay inordinate appetite, assuage thirst, promote digestion, and render those who use them capable of prolonged fatigue. As an example of how highly they are prized, it is stated that at Fezzan they sell in the fresh state at the large sum of a dollar for four seeds, and that they are offered to visitors as a substitute for coffee, being handed round on salvers. In conjunction with gold dust and salt, they form the staple commodity of Soudan. Mr. Christy's account is excellent, and his papers are well worth reading.

William Murrell, M.D.

3. *Sorel on Treatment of Œdema of the Glottis by Pilocarpine.*—M. Sorel, who is a military surgeon at Setif, Algeria, sent to the Société de Thérapeutique in Paris (*Jour. de Méd. de Paris*), a case of œdema of the glottis consecutive on typhoid fever, and cured by pilocarpine. A previous application of fifteen leeches had not given any relief. Ipecacuanha had no effect whatever, and subcutaneous injections of morphia had only given temporary relief. Almost in despair, M. Sorel tried an injection of a centigramme of nitrate of pilocarpine. A slight perspiration appeared, and the troublesome symptoms were removed. On the same evening a fresh injection of a centigramme was made, and on the next day two centigrammes. The patient soon recovered his strength, and became convalescent.

4. *Cornilleau on Treatment of Diphtheria by Oxalate of Potash.*—M. Cornilleau, in an interesting pamphlet, relates that, having to give attention to an epidemic of diphtheria, he obtained good results by the following treatment. He gave a decoction (*tisane*) of fresh sorrel, and every three hours a dessertspoonful of this mixture: Binoxalate of potassium, 2 grammes; infusion of green tea, 120 grammes; syrup of bitter orange-peel, 30 grammes. From the commencement of the attack, M. Cornilleau gave an additional emetic of hydrochlorate of pilocarpin, according to the following formula: Syrup of ipecacuanha, 45 grammes; powdered ipecacuanha, 1 gramme; hydrochlorate of pilocarpin, 1½ grammes; distilled water, 50 grammes. The crystals of pilocarpine must, in the first instance, be dissolved in distilled water. This draught should be taken in two parts, with an hour's interval, if the patient be an adult, in four doses if a young person, and in six doses if a young child. This draught brings on especially fits of nausea, followed by copious expectoration, rather than thorough vomitings. It is easy to understand that, afterwards, the flow of saliva set up by the jaborandi alkaloid carries away the false membranes. In the meantime, M. Cornilleau paints the front part of the neck with tincture of iodine, and repeats the painting twice a day. After that he gives oxalic preparations, with the intention of destroying the microphytes which generate diphtheria. When acute angina rapidly invades the throat, M. Cornilleau removes one or both the tonsils with the amygdalotome, and says that he succeeded in the three cases with which he met. He concludes by insisting on the necessity of a strengthening regimen of wine, grog, and nourishing food.

5. *Rogers on the Therapeutic Uses of Ergot in Nervous Diseases.*—The now widely extended use of ergot in various nervous disorders make the following clinical notes regarding the drug of considerable interest. They are furnished by Dr. J. G. Rogers, superintendent of the Indiana Hospital for the Insane (*New York Med. Rec.*, Oct. 27, 1881). It is not alone to the influence of ergot and the bromides on the calibre of the blood-vessels that the potent effects are due, but they both peculiarly, and not exactly similarly, possess a power to repress excessive nerve-life to a certain extent. The combination of bromide and ergot is used in such cases as do not positively require chloral. In milder types of active mania, ergot alone has seemed to exert a decided curative influence, and a large number of such cases have been solely treated with this agent with satisfactory results. The experience of the year presented in the clinical records, in which the history of every patient is regularly kept, as explained in his last report, fully endorses the efficacy of ergot as a means of controlling cerebral plethora, whether active or passive. Its action is prompt, and can be maintained in the majority of cases indefinitely without detriment. Beyond its special effect on the vaso-motor system, which is now generally recognised, there is every reason to believe that it exerts a peculiarly controlling influence over the molecular life of nervous tissue, when that life has gone beyond the physiological mean of activity, and has become erethetic, excessive, and self-destructive—what in another less mysterious tissue would be recognised as inflammatory. Practically it does control mental excitement whenever associated with congestion, whether the subject be anæmic and exhausted, or otherwise. In cases of acute mania, it seems to be always more or less applicable, and in the acute exacerbations of chronic mania it is equally so. As it has no direct hypnotic effect, however, in those cases when delirium has lasted for many days and nights without ceasing, and the patient must either sleep or die, as is often the case when admitted, it is necessary to assist its action with chloral-hydrate. This latter agent of itself, in full dose tends to produce a secondary passive fulness of the head, but this effect is obviated by the ergot.

6. *Chalot on Intradermic Ignipuncture for the Radical Cure of Inveterate Eczema.*—There are cases of eczema which resist every kind of internal treatment: arsenic, iodide of iron, iodine of potassium, chlorides of gold and of sodium, cod-liver oil, and which, at the same time, are in no way modified by the various local forms of treatment habitually used, viz., tannin, nitrate of silver, tincture of iodine, etc. In such circumstances there remains only one resource: the destructive method, with its various procedures. Dr. Chalot (*Paris Méd.*, Nov. 1881), chooses ignipuncture by means of Paquelin's cautery. He takes care to maintain the point of the cautery during the whole of the operation at white heat, because the cauterisation is then less painful than if performed with a cautery heated only red. He takes care to introduce the point into the thickness of the skin. Too superficial a cauterisation would not only fail, but would aggravate the disease. The

punctures must be made sufficiently near, at intervals of from 6 to 7 millimètres (about one-fourth of an inch); the inflammatory modification which follows the operation should not leave any point of diseased surface outside the sphere of its action. Dr. Chalot recommends that the cauterisation should extend at least from 5 to 6 millimètres beyond the limits of the eczema. The formation of new vesicles around the surface operated upon is thus prevented. After ignipuncture, the part is covered with compresses of cold water. The pain is not very great on the first day. It increases on the second and third days, when inflammatory reaction is produced by the elimination of the eschars. This is treated with compresses dipped in carbolised water, and covered with oiled silk. When the eschars have fallen off, the ordinary treatment of granulating wounds is followed. Slight cauterisations with nitrate of silver, and dressings with powdered oxide of zinc, are the methods which have given the best results in Dr. Chalot's hands. When the diseased surface is of small extent, not exceeding the dimensions of a five-franc piece, one sitting suffices. If the eczema occupy a very large extent, many operations may be necessary; one, for example, every week, care being always taken to go beyond the apparent limits of the disease.

7. *Verneuil on Galvanism in Coxalgia.*—M. Verneuil brought under the notice of the Paris Société de Chirurgie, at a meeting in October, an episode in the progress of coxalgia, which has not been sufficiently noted by writers on the subject, viz., a special form of recurrence of coxalgia after apparent cure. He gave the following as a type of this class of case. Five years since, he saw, with M. Leudet of Rouen, a girl, aged 9, who was attacked with coxalgia of a mild form at the outset, which M. Verneuil thought from its antecedents to be of a rheumatic character, and of which he made a favourable prognosis. The child was placed in a Bonnet's apparatus which, shortly afterwards, was succeeded by Bouvier's trough. The cure was tedious; a small abscess formed outside the joint, and was cured in a fortnight. Fifteen months ago, that is to say, three years and a half after the appearance of the affection, M. Verneuil declared the child to be cured. Both limbs were of precisely the same length; there was not the least lumbar lordosis, and there was only a small remnant of stiffness in the joint. During this time, the girl had become considerably developed, and the menses had appeared. M. Verneuil, therefore, announced that cure was complete. Shortly afterwards, the father of the girl came to tell him that she limped, and, in six months, the patient was again under his charge. There was, again, considerable deformity, very marked lumbar lordosis; apparent shortening was brought on by the drawing up of the pelvis, but there was neither swelling nor pain, nor any trace of inflammatory action. The faulty position was reproduced without any trace of inflammation. Several surgeons having persuaded the father not to proceed further, and persisting in declaring the child to be cured, although the deformity continued to increase, she was again brought to M. Verneuil. He sought for something in the case analogous to the mechanism of flexion consecutive on inflammations of the knee by paralysis of the triceps, and discovered that the muscles of the nates were completely paralysed. He thought, therefore, that the deformity was reproduced by the contraction of the psoas, the adductors, and the sartorius muscle. Under anæsthesia, by chloroform, he corrected the faulty position; the straightening was perfect, and there was complete symmetry. He again placed the girl in one of Bonnet's troughs; a month afterwards he applied Bouvier's apparatus, ordering that it should have a lengthened trial; and also ordered faradisation of the gluteal muscles; but it was a very long time before any good results followed this treatment. The latter fact gave to M. Verneuil the explanation of many others; the case was one of recurrence of deformity without return of inflammation of the joint; of muscles consecutively rendered powerless, whilst the antagonistic muscles retained their contractility. These facts led M. Verneuil to find in the muscular system a physiological explanation of the two periods of coxalgia. In the first stage, there are abduction, rotation outwards, evident lengthening, and permanent flexion. In the second stage, there are, on the contrary, abduction, rotation inwards, and shortening by the raising of the pelvis. These observations led M. Verneuil to form the following theory. The inflammation of the joint is if propagated to the muscles immediately in relation with the capsule, that is to say, to the psoas and the small gluteal muscles, leading to elongation of the limb with abduction. After a time these muscles become atrophied and lose their power; the inflammation spreads to the most distant muscles, that is to say, to the abductors and the sartorius; then come rotation inwards, shortening by elevation of the pelvis, that is to say, metamorphosis of position in the first stage of coxalgia; in the second period, slow contraction of the healthy muscles at the same time with the impotence of the muscles originally attacked. An important therapeutical indication is deducible from this fact, that of galvanisation of the enfeebled muscles.

8. *Melsens on the Treatment of Bronchial Affections of Pulmonary Phthisis by Ammoniacal Inhalations.*—M. Melsens highly recommends (*Bull. de l'Académie Belge, et Paris Méd.*, Oct. 22, 1881) the therapeutic employment of ammonia by inhalation in phthisis. Knowing that ammoniacal emanations may be respired without danger, of which the proof is the perfect health of workmen who dig guano, and also knowing the good effects of the air of cow-houses in pulmonary phthisis, effects which are generally with justice attributed to the emanations of carbonate of ammonia generated in these stables, M. Melsens conceived the idea that continuous but moderate respiration of this salt might be useful in other affections of the respiratory organs. He decided, after an attack of acute bronchitis, to make the experiment on himself. For that purpose, he wore outside his shirt a bag containing some pieces of carbonate of ammonia; after some time he was absolutely relieved from the affection; improvement set in from the first day. Several invalids who employed the same means obtained great benefit from it, even in cases of long continued chronic bronchitis. Amongst others, a physician at Brussels, who had suffered for a long time from an obstinate cough, due to chronic bronchitis, with dilatation of the bronchi, complicated with emphysema, asthma, and sometimes to acute laryngitis. He used the bag of carbonate of ammonia, and found himself perfectly cured.

9. *Vidal on Turpentine Compresses.*— M. Vidal, in a communication to the Therapeutical Society of Paris, Oct. 26, 1881 (*Gaz. Hebdom. de Méd. et de Chir.*, Nov. 4, 1881), reminded the Society that in 1871 he had recommended the use of compresses of

flannel, wetted with turpentine and covered with oiled silk. If the compress remain *in situ* for more than half an hour, vesication is generally obtained. The intensity of the revulsion may, however, be diminished by not putting on any impermeable covering, such as oiled silk, and allowing the turpentine to evaporate freely. M. Vidal attributes the remarkable success which he has obtained in cases of peritonitis not of a puerperal character, not only to the energetic revulsionary character, but to the absorption of the turpentine by the skin; the pulse rises, the general state and facies rapidly improved, and cure is abundant in cases which seemed desperate. He has also obtained excellent effects in the bronchopneumonia of infants.

10. *Testa on the Toxic Action of Santonine.*—Dr. Testa (*Il Morgagni*, 1881; *Lyon Méd.*, Oct. 9, 1881) desires, by his experimental researches, to call attention to the use and the too frequent abuse of santonine, and to show that it has a toxic action, even when administered in relatively small doses. It is necessary to be careful of the slowness with which it becomes eliminated from the organism, and of its accumulative power in the blood when it is administered in varied and successive doses. Testa has made experiments on frogs, pigeons, guinea-pigs, cats, and dogs. He deduces as the results of his experiments that the santonate of soda, injected under the skin of frogs, acts slowly. Pigeons are more sensitive to toxic action, and, at the same time, the phenomena are more distinct and more sensible. In dogs, even when administered in large doses, in the form of subcutaneous injection, of from three to four grammes of santonate of soda, the action of the salt is very slight. M. Testa, as a conclusion of the necroscopic researches performed on the bodies of animals submitted to experiment, has been led to admit that the action of santonine does not affect the spinal cord. In his experiments on pigeons, he has noted that by removing one of their cerebral lobes before the subcutaneous injection of santonate of soda, the toxic action showed itself more sensibly, and was even stronger, especially on that side of the body which was no longer under the nervous influence of the lobe which was removed. He therefore concludes that the action of santonine is general with regard to the brain, but that its special action is localised in the medulla oblongata.

11. *Chéron on the Employment of Effervescing Draughts containing Bromide of Potassium in Nausea, Vomiting, and Uterine Affections.*—Dr. Chéron (*France Méd.*, Oct. 1, 1881) has found that the combination of effervescent draughts and bromide of potassium gives very superior results to those which can be obtained by the separate employment of these two medicines. Hence, in cases of nausea and recent or chronic vomiting, he uses the following prescription. No. 1. Bicarbonate of potash, 2 grammes; water, 60 grammes; bromide of potassium, 2 grammes. No. 2. Citric acid, 3 grammes; water, 120 grammes; syrup, 40 grammes. A teaspoonful of No. 1 is put into a glass, and a tablespoonful of No. 2 added to it; the mixture must be shaken, and taken immediately. This dose should be taken every hour or two hours. Nos. 1 and 2 represent the maximum quantity which should be used every day in cases of localised pelvic-peritonitis. This dose frequently stops the nausea and vomiting, even during the acute stage.

12. *Gibson on Sea-Sickness.*—Mr. Charles Gibson, in the *Brit. Med. Jour.*, Oct. 1881, p. 730, draws attention to the great value of bromide of sodium in large doses in the treatment of sea-sickness. Amyl-nitrite he has found only occasionally useful; but for readiness of application, especially among emigrants, the hypodermic use of morphia is the most convenient and efficacious remedy.

13. *Prior on the Treatment of Diabetes Insipidus.*—Dr. Prior, in the *Lancet*, Oct. 1881, p. 662, reports a case of this disease in which large doses of valerianate of zinc (ten to twelve grains three times a day), given in combination with tincture of valerian in two-drachm doses was, after two months' perseverance, followed by a perfect cure.

14. *Atkinson on Nitrite of Amyl and Nitro-Glycerine in the Treatment of Toothache.*—Dr. Atkinson finds (*Practitioner*, Oct. 1881, p. 263) that cotton-wool, steeped in a one per cent. solution of nitro-glycerine, applied to a decayed tooth, will give instant relief; if, so soon as the pain has ceased, laudanum be applied by means of fresh cotton-wool, the pain may be kept off regularly for four hours or more at a time.

15. *Murrell on Resorcin in Asthma, and the Effects of an Overdose.*—In the *Med. Times and Gaz.*, Oct. 1881, p. 486, Dr. Wm. Murrell gives the history and composition of this new drug, and describes its value in asthma, and the results of an overdose. From the results of experiments on animals, Dr. Murrell was led to hope that good results would follow its exhibition in spasmodic asthma. Accordingly, after a host of other remedies had proved useless in the case of a young woman, aged nineteen, she was given, during a severe paroxysm, half a drachm of resorcin in milk. The relief was marked. Next day, the urine presented the appearance usual after taking carbolic acid. On two subsequent occasions the same dose failed to give relief; so, on the next attack, one drachm was exhibited. Slight giddiness immediately followed, and she feel asleep, all dyspnœa passing away. The same result followed on four subsequent occasions. The action on the urine was more marked with the larger dose. She was satisfied that the powders eased her, but she postponed taking them as long as possible on account of the giddiness that followed. With drachm-and-a-half doses, no unpleasant results were noticed. One morning, at seven, during a violent attack, she was given two drachms of the drug in a little milk. Almost immediately, as she subsequently related, it flew to her head, she felt giddy, and had 'pins and needles' all over. At 7.10, Dr. Jessop found her insensible, in a profuse perspiration from head to foot, groaning, pallid, lips blanched, tongue dry; no spasms. The stomach pump was used, and stimulants given. At 8.45, she was out of danger. The reason of the violence of the symptoms was that the last dose of resorcin was not only larger than the previous ones, but also the drug was newer and purer. The symptoms developed in the case presented several points of interest. 1. They were much those of carbolic acid; 2. The temperature fell at 8 a.m. to 95 deg. in the axilla. Dr. Andeer thinks that albuminate of iron and red wine form the best antidotes in poisoning by resorcin.

16. *Williams on Tannin in Diphtheria.*—Dr. A. Wynn Williams, in the *Brit. Med. Jour.*, Oct. 1881, p. 654, claims for the local application of tannin all the value that he maintained this drug possessed in 1867, when, before the Obstetrical Society, Dr. Williams read a paper on the treatment of diphtheria. The deposit, characteristic of the disease, is almost instantaneously removed by the free application of a solution of tannic acid, two drachms;

rectified spirits of wine, two drachms ; and of water, six drachms.

17. *Young on Iridin in Gall-stones.*—Dr. P. A. Young, in the *Brit. Med. Jour.*, Oct. 1881, p. 694, speaks highly of the value of iridin as a preventive to the formation of gall-stones. In several cases in which this drug has been given a fair trial, the results seemed to justify the favourable opinion that Dr. Young had formed of its value.

18. *Saundby on the Treatment of Consumption.*—Dr. Robert Saundby, in the *Practitioner*, Oct. 1881, p. 249, gives a very valuable *résumé* of this subject. Cod-liver oil and quinine are Dr. Saundby's sheet anchors, the hypophosphites having disappointed his expectations. Good nourishment and attention to the digestive functions form the best treatment of cough. If a consumptive patient want to take a short cut to the next world, he has only to take an opiate, paregoric for example. Codeia is most valuable. Camphor inhaled, a lump under the pillow, or some powder in a jug of boiling water, forms an effectual anodyne. To prevent dryness of the mouth, a compressed tablet of chlorate of potash and borax in the cheek remains all night, and causes sufficient salivary secretion to keep the air-passages moist. The bronchitic attacks are to be met by the use of turpentine vapour and counter-irritation, and sulphur internally. Nothing controls the profuse secretion of the bronchial mucous membrane so readily as fifteen to twenty grains of sulphate of iron, given in pills or mixture during the day. The use of oro-nasal inhalers, charged with carbolic acid or eucalyptus oil, is strongly advocated. For anorexia, quinine does more than any other drug; while the peptones, Hoff's malt-extract, and such like preparations, are, in many cases, most valuable. Cod-liver oil, in doses of one teaspoonful, after meals, thrice a day, Dr. Saundby believes to be quite sufficient, larger doses not being assimilated. The diarrhœa is always controlled by two drachms of dilute sulphuric acid to the pint of sugared orange-water, drunk *ad libitum*, unless ulceration be present; and then starch and laudanum enemata, or an enema of half an ounce of liquid extract of ergot, will, in most cases, give relief. The sweating is generally controlled by the same means as are used for the diarrhœa; but if not, then atropine or picrotoxine must be used. Hæmoptysis Dr. Saundby treats with ergot internally or subcutaneously. In conclusion, a tabulated view is given of the different remedies. Specific : quinine, cod-liver oil ; Cough : liquorice, camphor, codeia lozenges ; Bronchitis : turpentine inhalations and epithens ; Purulent expectoration : eucalyptus inhalation, sulphate of iron ; Anorexia : quinine, peptonised food, malt extracts, cod-liver oil, ether, alcohol; Diarrhœa : sulphuric acid, starch and opium enema, ergot enema : Sweating : sulphuric acid, ergot, ergotine. A good prescription in many cases is the following : ℞ Quinæ sulphatis, gr. j ; specific, tonic ; Ferri sulphatis, gr. v ; for profuse expectoration ; Acidi sulphurici diluti, ♏ xv ; for sweating, diarrhœa, and hæmoptysis ; Aquæ, ad ℥j. M. To be taken thrice daily. If the sweating be not hereby checked, a minim of solution of sulphate of atropine may be added, and codeia lozenges may be given, with cod-liver oil in addition, if need be.

Richard Neale, M.D.

MEDICINE.

RECENT PAPERS.

1. Leloir.—Two Cases of Muscular Atrophy of Peripheral Origin. (*Le Progrès Méd.*, 1881, Nos. 42, 43.)
2. Cyr.—Cirrhosis of the Liver. (*Gaz. Hebd. de Méd. et de Chirurg.*)
3. Kynsey.—On Parangi. (*Brit. Med. Jour.*, Oct. 1881, p. 712.)
4. Booth, J. Mackenzie.—On Acute Bright's Disease. (*Brit. Med. Jour.*, Oct. 1881.)
5. Clubbe, C. P. B.—Diabetes Insipidus Treated by Electricity. (*Lancet*, Oct. 1881, p. 749.)
6. Dukes, Clement.—On the Period of Incubation of Scarlatina, Varicella, Parotitis, and Rötheln. (*Lancet*, Oct. 1881, p. 743.)
7. Warner, Francis.—On Hydrophobia in a Child. (*Lancet*, Oct. 1881, p. 664.)
8. Barié and Du Castel.—Embolism of the Aorta. (*Archiv. Gén. de Méd.*, Jan. 1881.)

1. *Leloir on Two Cases of Muscular Atrophy of Peripheral Origin.*—M. Leloir (*Le Progrès Méd.*, 1881, Nos. 42, 43), during his *internat* with Professor Vulpian, had under observation two cases of muscular atrophy of peripheral origin. The first case was that of a previously healthy man, attacked, six months after a wound of the left leg by a shell, and freezing of both lower limbs, in 1870, by deformity of both feet in varo-equinus, more marked on the left side, and for which section of the tendo Achillis and long peroneal tendon was performed unsuccessfully. Six months after these tenotomies the muscles of his legs atrophied, especially the left. This atrophy steadily increased. In 1872, he suffered from pains in the knees, especially the left. In 1873, the thenar and hypothenar muscles of the right hand, then of the left, atrophied by degrees. This atrophy steadily increased, and was accompanied by cyanosis and lowering of temperature of the hand and fingers. About the same time there appeared fibrillar twitching of the muscles, not only of the hands, but of the muscles of the arms, shoulders, trunk, pectorals, and of the muscles of the thighs. From time to time there was pain in particular muscles, especially in the knees and wrists. There was no anæsthesia. In the second case the patient had pleurisy on the left side, and two months after a severe blow on the same side from the shaft of a cart, and some months later had an abscess in his left hand, with inflammation spreading up the arm. Three years later, in 1877, he noticed that the thenar and hypothenar muscles had commenced to atrophy, and at the same time the atrophy appeared in the muscles of the forearm. From the first also there was anæsthesia of the palmar surface of the four last fingers of the left hand. Then the nails became thickened, roughened, and deformed, and some months after there was some pain in the ends of the fingers. In 1881, there was complete atrophy of the muscles of the hand and antero-internal region of the left forearm; the muscles of the upper arm were also atrophied, and for the last two years the patient had noticed twitchings of the muscles of the left side of the thorax, and of the arm and shoulder, which made one fear the extension of the disease and the atrophy of new groups of muscles.

2. *Cyr on Cirrhosis of the Liver.*—Dr. Cyr of Vichy (Reprint from *Gaz. Hebdom. de Méd. et de Chir.*) having met with a number of cases of enlarged liver, many of which seemed, from their

subsequent histories, so far as he could trace them, to become ultimately atrophied, has collected 205 cases of cirrhosis of different forms published during the last few years, and has analysed the data given concerning them. He shews that a great many cases do not conform to the typical descriptions of either the atrophic or hypertrophic forms of cirrhosis. He thinks the explanation may be found in the co-existence of two or more etiological factors, each of which determine certain changes peculiar to itself. Finally, he arrives at the following conclusions. 1. The so-called atrophic sclerosis, or alcoholic sclerosis, may, and often does present a first stage, during which the liver is enlarged. Jaundice supervening under these circumstances may give rise to the belief that it is a true hypertrophic cirrhosis, when this is only an epiphenomenon, or the result of some complication, or a symptom of some other co-existing affection. 2. The discovery of a diminution in the size of the liver is of importance in the diagnosis of the form of the sclerosis; the enlargement of the liver is of infinitely less importance, as it may be the effect of very different circumstances, and may exist in very different cases. 3. The varied appearances which may be presented by hepatic sclerosis are connected either with distinct etiological elements, or with the simultaneous action of many of these elements, each having its special influence, and impressing the affection with its own characters. 4. We may admit provisionally a classification into connective and epithelial cirrhoses, or interstitial and parenchymatous, but rather from a histological than a clinical standpoint. 5. The comparative duration of the evolution of the disease in these two categories is difficult to establish, from want of precise data. At any rate, it is not proved that it is shorter in one than the other. 6. A rapid termination is more to be feared in parenchymatous than in interstitial cirrhosis, because the parenchyma is the principal seat of the process of disorganisation. 7. Except in the early stages, in which we possess means of a certain efficacity (revulsives, alkalies, salts of ammonia, etc.), the treatment, in either category, is purely palliative, and can but retard the termination. ROBERT SAUNDBY, M.D.

3. *Kynsey on Parangi.*—In the *Brit. Med. Jour*, Oct. 1881, p. 712, an interesting account may be found of this obstinate epidemic disease met with in Ceylon. The etiology of the affection is obscure. It is evidently contagious, through the discharges coming from the ulcers and eruptions that accompany an attack. A healthy child may suckle with impunity a diseased mother. If allowed to run its course it may last six months, up to its third stage, when the characteristic eruptions develope themselves, passing into the fourth stage, that of sequelæ, which varies in duration according to treatment, often extending to eight years. No mention is made, however, as to the best method of treating the disease. [In addition to the papers on the subject noted in the *Med. Digest*, others have since appeared in the *Med. Times and Gaz.*, vol. i, 1877, p. 169; ii, 1878, p. 593; ii, 1879, p. 420; i, 1880, pp. 201, 688.—*Rep.*]

4. *Booth on Acute Bright's Disease in an Infant Three Months old.*—Dr. J. Mackenzie Booth relates, in the *Brit. Med. Jour.*, Oct. 1881, p. 626, the case of an infant who caught cold, and passed safely through an attack of acute desquamative nephritis.

5. *Clubbe on Diabetes Insipidus treated by Electricity.*—Mr. C. P. B. Clubbe reports a case of diabetes insipidus, cured by faradisation over the kidneys for a space of five months. [Vide *Lancet*, October 1881, p. 749. In the *London Med. Record*, Jan. 1881, p. 15, a case by Dr. Althaus, cured by the same mode of treatment, is reported.]

6. *Dukes on the Period of Incubation of Scarlatina, Varicella, Parotitis, and Rötheln.*—Dr. Clement Dukes, in the *Lancet*, October 1881, p. 743, contributes a very interesting paper on these subjects, upon which his official capacity in the Rugby School and Hospital entitle him to speak with authority. In seventeen cases of scarlatina, in which the incubation period was carefully studied, the earliest was one day, the latest, nine. In fifteen cases of varicella, the earliest date noted was fourteen days, the latest, eighteen. In about fifty cases of mumps, the incubation period extended from sixteen days the earliest, to twenty-five the latest. The frequently attending orchitis of mumps, Dr. Dukes shows, is not a metastasis, but a complication that can be watched for; never coming before nor after a certain definite time, and coming only in certain cases—viz., in those that have arrived at or beyond the age of puberty. This fact, says Dr. Dukes, is a great guide to treatment; for by keeping all likely cases in bed until the ninth day, and carefully taking the temperature, which rises before the pain is felt, and, on the slightest rise of temperature, applying a hot poultice to the testicles, the severe pain is mitigated, and the acute general symptoms are diminished by the patient being placed thus early under general treatment. In one case, the orchitis took the place of the parotid swelling on the first day, the parotids not being touched from beginning to end, but only the submaxillary glands; and this case was the most severe ever met with. Rötheln Dr. Dukes believes to be a disease *sui generis*, and does not think it bears any more relation to measles than does varicella to variola. The incubation period is very difficult to trace, but twelve to eighteen days appear about the average duration. A very good description is given of a typical mild and of a typical bad case.

7. *Warner on Hydrophobia.*—Dr. Francis Warner publishes in the *Lancet*, Oct. 1881, p. 664, an interesting case of a young man admitted into the London Hospital on September 21, having had a fight with a fellow-workman on the 19th, for which he was dismissed from his employment. Next day he felt ill, thirsty, and very feverish. He was naturally of an excitable and passionate temperament. Two months before the onset of his illness, he had been bitten by a dog, and had been, ten days subsequently, mentally depressed, expressing his fear of hydrophobia. At 1.30 p.m., September 21, when seen in bed, he was the subject of violent and frequently recurring spasmodic paroxysms. He was semi-unconscious, but could kick at, swear at, spit at, and throw a vessel at, the nurse. The tongue was bitten, and the saliva was blood-tinged. The jaws were closed by trismus; he appeared desirous to drink, but could not. Splashing water near, or pouring water over his closed lips, did not affect him. Urine drawn off during life was loaded with albumen, and also after death. There was no opisthotonos, and no lyssæ were found under the tongue. A tenth of a grain of curare was given hypodermically at 4.20, and he quietly died at 4.30. At the necropsy, the spinal cord and meninges were much congested, but no hæmorrhage was found in either cord or brain, and no fracture. All the internal organs were much congested, the kidneys intensely so, but otherwise normal. It is to be remarked that the onset of the symptoms was very abrupt, and the illness lasted only twenty-two hours.

The absence of any increased symptoms when water was splashed near the patient, or when the attempt was made to give him drink, was against the idea of hydrophobia; while the absence of opisthotonos and abdominal hardness, with the fact that muscular spasms were chiefly limited to the respiratory muscles, was against the diagnosis of tetanus; and the final diagnosis of hydrophobia rested upon the limitation of spasms to the respiratory muscles and mouth, the attendant asphyxia, and absence of opisthotonos and hardness of the abdominal muscles, the impossibility of drinking, the great distress from spasms, and dread of them. At page 674 is an instructive editorial article upon this anomalous case, supporting the diagnosis of hydrophobia. [Singularly enough, in the same number of the *Lancet* as that recording this interesting case, two cases of acute renal disease are referred to that may possibly throw some further light upon Dr. Warner's case (vide page 672). Dr. Litten, of Berlin, describes two acute cases of renal disease, which must be classed as renal mycoses. The conspicuous symptom of each case was the gradual diminution of the secretion of urine, with rapid development of uræmic symptoms. In a boy, after a very short illness, the kidneys were found after death intensely congested, crammed with bacteria, the urine having been loaded with albumen before death. A girl, aged seventeen, died under similar conditions, the kidneys showing the same changes. The kidneys in Dr. Warner's case do not appear to have been examined microscopically.—*Rep.*] R. Neale, M.D.

8. *Barié and Du Castel on Embolism of the Aorta, with Experiments on the Production of Cardiac Murmurs.*—The authors (*Archiv. Gén. de Méd.*, Jan. 1881), narrate the case of a laundress, aged 30, who was confined, for the third time, four months and a half before admission to hospital, when she was in a febrile condition. A few days after she had a severe rigor, with great pain in the loins, and tingling in the limbs, followed by paraplegia. There was total absence of pulsation in both limbs. Not a trace of murmur was to be heard over the heart; but in spite of this the diagnosis was ulcerative endocarditis of puerperal origin, with embolism of the abdominal aorta, and consecutive paraplegia. A bed-sore over the sacrum and incontinence of urine and fæces followed, the urine being bloody and albuminous. Up to the time of death consciousness was retained, and the cardiac sounds maintained their purity. At the necropsy, ulcerative endocarditis of the left side was found, along with a large clot attached to the wall of the auricle, and prolonged into the ventricle, where it was adherent to the chordæ tendineæ. The auriculo-ventricular valve was perforated; the aortic competent, but inflamed. At the bifurcation of the aorta there was a large fibrinous clot, not adherent to the vessel. The spinal meninges and the cord itself were much congested in the lumbar region, the kidneys were studded with infarcts, the spleen congested, and its main artery obliterated; there were no signs of embolism in the brain, the lungs, or the liver. The authors cite several cases of aortic embolism and thrombosis, and point out that the former is more frequently met with than the latter. To explain why there was no murmur in their case, when the clot would be expected to produce one, MM. Barié and Du Castel, under the supervision of M. Potain, arranged a series of tubes of the same calibre, through which currents of water (at the same pressure) flowed. In these tubes were placed diaphragms of the same metal, perforated by apertures of different shape and position. They found that the intensity of the murmur was the same in all, whatever the form and situation of the orifice might be. Then to make out whether the material of which the obstacles were composed had any influence, they removed the diaphragms, and substituted foreign bodies of different nature and resistance. The murmur was loud and distinct when the obstacle was hard and resistant; but when it was soft and velvety the murmur almost disappeared. They therefore conclude: 1. That the form of the orifice has no influence over the production of the murmur; 2. That the consistence of the walls of the orifice exerts a notable influence upon the intensity of the murmur. G. A. Gibson, M.D.

SURGERY.

RECENT PAPERS.

1. Bryant, T.—On Surgical Operations in Phthisis. (*Lancet*, Oct. 1881, p. 753.)

2. Whitehead, Walter.—On Excision of the Tongue by Scissors. (*Lancet*, Oct. 1881, pp. 698, 745.)

3. Illingworth.—On Manipulation in Reduction of Dislocated Humerus. (*Brit. Med. Jour.*, Oct. 1881, p. 626.)

4. Cousins, J. Ward.—On Antiseptic Paracentesis, with Trocar. (*Med. Times and Gaz.*, Oct. 1881, p. 554.)

5. Jones.—On Successful Gastrostomy. (*Brit. Med. Jour.*, Oct. 1881, p. 709.)

6. O'Farrell, J. M., and Holmes.—Wounds of the Lung. (*Lancet*, Oct. 1881, p. 748.)

7. Polaillon.—A Modified Operation for Resection of the Lower End of the Tibia and Fibula. (*Jour. de Méd. de Paris*, Oct. 1881.)

8. Ehrendorfer.—Excision of a Wedge-Shaped Piece from Various Bones. (*Wiener Med. Woch.*, Nos. 14-16.)

1. *Bryant on Surgical Operations in Phthisis.*—Mr. T. Bryant read before the Medical Society the notes of a case in which he had amputated the leg of a man, aged twenty-three, who, three years previously, had so injured his knee as to set up such mischief that, at the time of admission, had completely disorganised the joint. Both apices were dull, and respiration 'cogged', especially on the left side (*Lancet*, Oct. 1881, p. 753). On June 7, 1881, the leg was amputated under chloroform, and on July 14, the patient was discharged convalescent, and looking comparatively well. The lung-mischief was not only arrested, but much diminished. An interesting discussion followed the reading of the case. Mr. Bryant replied, and concluded his admirable remarks by stating that in such a case any surgical interference must be trenchant; excision not being put into comparison with amputation. [Several interesting papers are noted at Section 1630:3 of the *Digest*, and since the date of the 1st edition, papers have appeared by Mr. Savory, *Lancet*, Jan. 1878, p. 273; Mr. Bryant, *ibid.*, Jan. 1879. pp. 10, 51; Mr. Maunder, *ibid.*, p. 101; and M. Verneuil, *Med. Times and Gaz.*, Feb. 1879, p. 510.—*Rep.*]

2. *Whitehead on Excision of the Tongue by Scissors.*—Mr. Walter Whitehead, in the *Lancet*, Oct. 1881, pp. 698, 745, gives the histories of twenty-eight cases in which this operation has been performed, and of which Mr. Whitehead claims to have been the originator. The mouth being opened to the full by Mason's gag, the tongue is drawn out by a double ligature, passed through its tip. The operator then divides all the attachments of the

tongue to the jaw and to the pillars of the fauces; then the muscles at the base of the tongue are cut across by a series of short snips, until the entire organ is separated on the plane of the inferior border of the lower jaw; any artery is twisted as divided. For three days the patient is fed entirely by enemata.

3. *Illingworth on Manipulation in Reduction of Dislocated Humerus.*—Mr. Illingworth, in the *Brit. Med. Jour.*, Oct. 1881, p. 626, reports two cases in which dislocation of the humerus into the axilla was readily reduced by the following method. 'The arm being abducted and extended with slight force by an assistant, I firmly grasped the scapula with the right hand over the acromion, and depressed it in such a manner as to make the lower edge of the glenoid cavity slide over the rounded head of the humerus, whilst with the fingers of the left hand I exerted gentle pressure upwards on the shaft of the humerus, just below the head. Reduction was in each case immediate.'

4. *Cousins on Antiseptic Paracentesis, with Trocar for same.*—Dr. J. Ward Cousins, in the *Med. Times and Gaz.*, Oct. 1881, p. 534, describes and figures an ingenious trocar and cannula, with which paracentesis of any part of the body can be performed, without allowing the possibility of any air entering the parts tapped. The instrument is made by Messrs. Arnold and Son, of West Smithfield.

5. *Jones on Successful Gastrostomy.*—Mr. Thomas Jones (*Brit. Med. Jour.*, Oct. 1881, p. 709) reports the case of a woman, aged 21, suffering from stricture of the œsophagus after swallowing nitric acid, in whom the operation of gastrostomy was successfully carried out in the manner described by Mr. Bryant, and reported at p. 202 of the LONDON MEDICAL RECORD. The patient had gained 8 lbs. in weight when she last reported herself.

6. *O'Farrell and Holmes on Wounds of the Lung.*—In the *Lancet*, Oct. 1881, p. 748, are recorded two interesting cases of recovery from severe wounds of the lungs. Surgeon-Major T. M. O'Farrell's case was that of a porter wounded in the late riots at Limerick. A sword-bayonet entered the right axilla, having first penetrated the muscles of the arm. Immediately his mouth filled with blood, and he felt very faint. When seen, twenty minutes afterwards, he was very faint, and complained of great oppression about the chest; his pulse could scarcely be felt, and now and again he gave a short cough, when a stream of blood issued from his mouth. In nineteen days the man was sufficiently recovered to walk about. The case is a good instance of the comparative impunity with which a young and healthy man may receive injuries of so delicate and complex an organ as the lung. Dr. Holmes' case was very singular. A miner, standing at the bottom of the shaft of a mine 225 ft. deep, was wounded by a drill that fell from above. The drill measured three feet in length, and weighed eight pounds and a half. The bit of the drill struck his back near the superior angle of the left scapula, emerging in front, on a line with the left nipple, fracturing the sixth rib. The wound was eight inches and a half in length. The drill passed through the man's body almost up to its head. The patient called upon some of his comrades to pull out the foreign body, and two men laying hold, forcibly extracted it, considerably tearing, in the process, the lung and flesh. When admitted into the hospital the patient was bleeding freely, and in a fainting condition. Air at every respiration passed, with a gush of blood, from each aperture. Sixteen days after the wound, the patient walked out of the hospital to see some street demonstration, and in two months he felt nearly as strong as ever; the lung, however, had shrunk to about two-thirds its natural size. R. NEALE, M.D.

7. *Polaillon on a Modified Operation for Resection of the Lower End of the Tibia and Fibula.*—In all the known operations for tibio-tarsal resection, the first step consists in dividing the fibula above the malleolus and removing the latter. M. Polaillon (*Jour. de Méd. de Paris*, Oct. 15, 1881) maintains that this practice should be avoided, whenever it is possible, by removing the malleolus. The field of operation is uselessly augmented, and the foot is deprived of the point of support indispensable for the re-establishment of its functions. Subperiosteal resection is a great step in advance, for it allows the reconstruction of the mortise if the bone be reproduced; but the osseous reproduction may fail, and in many cases, instead of preserving only the periosteal sheath of the malleolus in the hope of its regeneration, it will be admitted that it is safer to preserve the malleolus itself. To summarise, M. Polaillon proposes to perform tibio-tarsal resection by the following method. First stage—Subperiosteal resection, with the chain saw or chisel, of a segment of the fibula above the external malleolus, which is left attached to the astragalus. Second stage—Loosening of the periosteum from the inferior extremity of the fibula and os calcis; and dislocation of the foot outwards. Third stage—Division of the articular end of the tibia. Fourth stage—Rasping or section of the articular surface of the astragalus, and restoration of the foot to its normal position.

8. *Ehrendorfer on the Excision of a Wedge-Shaped Piece from Various Bones.*—This writer gives (*Wien. Med. Woch.*, Nos. 14-16), the results of five operations of the above nature, performed in Billroth's clinic, and states the following as his conclusions. 1. In talipes equino-varus, frequent correction of the deformity in young patients will usually suffice; only in old subjects and marked supination of the foot is it necessary to perform the wedge-excision after manipulation has failed. The skin-incision lies transverse, and the base of the wedge upward and outward. 2. When, in talipes equinus, ankylosis of the ankle has taken place, the wedge ought to be taken from the tibia. 3. In the case of the knee ankylosed in the flexed position, the wedge ought, in adults, to be taken from the articular extremities; in those who have not reached puberty, above the epiphysis of the femur, in order not to interfere with the growth of the bone. Also, the wedge is rather to be too small than too large. 4. All five cases had a most favourable course, and thus the operation may be justifiably done where the orthopædic treatment does not give the desired result. JAMES ANDERSON, M.D.

ORTHOPÆDIC SURGERY.

RECENT PAPERS.

1. ALLAN, JAMES.—Spinal Caries, with Suppuration not presenting externally: Necropsies. (Four cases, all in aged people.) (*Lancet*, June 25, 1881.)

2. ANDERSON, R. J.—Notes of a Case of Intra-uterine Amputation. (*Brit. Med. Jour.*, July 16, 1881.)

3. BAKER, HENRY.—On Congenital Talipes Equino-varus.

4. Beauregard.—Straightening of a Case of Genu Valgum by Osteotomy. (*Rev. de Chirurgie*, 1881, p. 429.)

5. Beauregard. — Genu Valgum: Subcutaneous Linear Osteotomy. (*Rev. de Chirurgie*, No. 1, 1881.)

6. Bennett, E. H.—Osteotomy. (*Surg. Soc. of Ireland*, March 18, 1881.)

7. Berger.—Subperiosteal Excision of the Elbow. (*Rev. de Chirurgie*, 1881, p. 151.)

8. Boyd, Stanley.—Registrar's Report of University College Hospital: Deformities, p. 17: (Various operations for Genu Valgum, Ankylosis, etc.)

9. Brachet.—Hysterical Hip-Disease Cured by the Magnet. (*Le Progrès Médical*, July 23, 1881.)

10. Brauer.—Contribution to the Treatment of Genu Valgum. (*Betz's Memo.*, 1880.)

11. Brodhurst, B. E.—Observation on the Nature and Treatment of Genu Valgum. (*Proc. Royal Med. and Chir. Soc.*, vol. ix, No. 1.)

12. Bryant, T.—Renewal of Upper Part of Femur after Removal for Necrosis. (*Lancet*, March 12, 1881.)

13. Buzzard.—On the Affection of Bones and Joints in Locomotor Ataxy, and its Association with Gastric Crises. (*Brit. Med. Jour.*, 1881, vol. i, p. 340.)

14. Charcot.—Demonstration of Arthropathic Affection of Locomotor Ataxy. (*Ibid.*, Aug. 13, 1881.)

15. Charcot.—The Osseous Changes in Progressive Locomotor Ataxy. (*Gaz. des Hôpitaux*, Jan. 11, 1881.)

16. Chavasse, T. F.—A Method of Treating Curves of the Tibia in Hospital Out-patient Practice. (*Brit. Med. Jour.*, July 30, 1881.)

17. Depaul.—Deviation of the Vertebral Column: Xiphosis: Pregnancy. (*Gaz. des Hôpitaux*, 1881, No. 7.)

18. De Saint-Germain.—On Torticollis. (*Gaz. des Hôpitaux*, 12 and 14, April 1881.)

19. Desprès.—Treatment of False Joint. (*Le Progrès Médical*, 1881.)

20. Fagge, Hilton.—On Rickets. (*Lancet*, Nov. 20, 1880.)

21. Farabeuf.—Remarks on Berger's Case (*suprâ*). (*Rev. de Chirurgie*, 1881, p. 151.)

22. Feurer, G.—Anatomical Investigations in Cases of Spondylitis. (Virchow's *Arch.*, Oct. 7, 1880.)

23. Finlay.—Case of Hysterical Contracture. (*Med. Times and Gaz.*, Sept. 17, 1881.)

24. Fisher, H.—Splint for Bow-Legs in Children. (*Lancet*, vol. i, 1881, p. 276.)

25. Fitzgerald, T. N.—Vicious Union of Fractured Femur, simulating Dislocation on Dorsum Ilii: Successful Operation: (Osteotomy with chisel.) (*Australian Med. Jour.*, April 15, 1881.)

26. Fridolin, J.—Studies Concerning the Growth of Human Limbs after Birth. (*Archiv für Anat. und Phys.*, 1881.)

27. Gosselin.—Blennorrhagic Arthritis of the Knee: Ankylosis. (*Gaz. des Hôptaux*, Feb. 10, 1881.)

28. Goodhart.—On Rickets. (*Lancet*, Jan. 8, 1881.)

29. Gould, A. P.—Rapid Death after Osteotomy of the Tibia. (*Brit. Med. Journ.*, 1881, vol. i, p. 850.)

30. Gould, A. P.—Case of Congenital Absence of Left Fibula, Cuboid, and Fourth and Fifth Metatarsal Bones. (*Lancet*, Nov. 20, 1880.)

31. Grattan, N.—A Method of more effectually Securing Sayre's Jacket after it has been cut. (*Lancet*, Nov. 20, 1880.)

32. Guyon and Féré.—A Note upon Muscular Atrophy consecutive to some Injuries of the Hip. (*Le Progrès Médical*, April 29, 1881.)

33. Hackett, C. W.—Case of Fractured Spine (in the reporter himself, a medical man): treated by Sayre's Plaster Jacket. (*Boston Med. and Surg. Jour.*, No. 7, 1880.)

34. Hagmann.—On the Origin and Treatment of Lateral Muscular Curvatures of the Spine. (Review in *St. Petersb. Med. Woch.*, Oct. 30, 1880.)

35. Hay, G.—Case of Stiff Knee Cured by Forcible Flexion. (*Philad. Med. Times*, April 23, 1881.)

36. Holl, M.—On the Etiology of Congenital Flat Foot. (*Archiv für Klin. Chir.*, Band xxv.)

37. Holmes, O. W.—On an Hysterical Spine (?) (*Lancet*, Aug. 13, 1881.)

38. Karlsioe, W. J.—Facts in Regard to the Swedish Movement Cure. (*Philad. Med. Times*, Jan. 29, 1881.)

39. Kassowitz, M.—Normal Ossification and the Diseases of the Bones in Rickets and Hereditary Syphilis. (*Med. Jahr.*, 1880.)

40. König.—Scoliosis and Pott's Disease. (*Lehr. des Spec. Chir.*, Berlin, 1881.)

41. Kormann, E.—Upon Malformations of Intra-uterine Origin, and their Relation to Spontaneous Amputation in the Fœtus. (*Jahr. für Kinder.*, 1880, Band xv, Heft 3 and 4.)

42. Küster.—On the Treatment of Fracture of the Spine. (Congress of German Surgeons, 1881. See *London Med. Record*, July, p. 286.)

43. Küstner, O.—A Case of Congenital Genu Valgum in an otherwise well-formed Infant. (*Rev. de Chirurgie*, 1881, p. 443.)

44. Lancet.—Leading Article on Rickets. (Nov. 20, 1881.)

45. Lannelongue.—Incipient Hip-Disease: Tubercle of the Bone. (*Rev. de Chirurgie*, 1881, p. 156.)

46. Ledentu, M.—Intra-uterine Rickets. (*Rev. Méd.*, 1881, July 30.)

47. Lee, B.—Some Tabular Results of the Movement Cure. (*Phil. Med. Times*, Feb. 26, 1881.)

48. Leroux.—Amputations and Excisions in Phthisical Patients. (*Rev. de Chirurgie*, 1881, p. 176.)

49. Macewen, W.—Transplantation of Bone. (*Proc. of Roy. Soc.*, vol. xxxii, No. 213.)

50. Marey.—Studies of the Gait of Man. (*Compt. Rend.*, tome xci, 1880, p. 261.)

51. Ménard.—Experimental Investigations into Delore's Treatment of Genu Valgum. (*Rev. de Chirurgie*, Sept. 1881.)

52. Morris, H.—Specimen of Genu Valgum. (*Brit. Med. Jour.*, May 21, 1881, p. 809.)

53. Morton, T. G.—Club-Foot. (*Phil. Med. Times*, Jan. 29, 1881.)

54. Morton, T. G.—Complete Osseous Ankylosis of Knee Treated by Removing a Wedge of Bone. (*Phil. Med. Times*, March 12, 1881.)

55. Nicaise.—Plastic Ankylosing Arthritis of the Knee. (*Gaz. des Hôpitaux*, 25 Jan. 1881.)

56. Ollier.—Excision of the Hip Considered with Regard to the Indications for it, and its Final Results. (*Rev. de Chirurgie*, 1881, Nos. 3, 5, and 7.)

57. Owen, Edmund.—Quiet Vertebral Caries. (*Brit. Med. Jour.*, 1881, vol. i, p. 920.)

58. Parrot.—Syphilitic Fractures of the Bones in Children. (*Gaz. des Hôpitaux*, May 3, 1881.)

59. Perier, E.—Congenital Dislocation of the Knee: the leg completely bent back upon the thigh in a new-born child. (*Rev. de Chirurgie*, 1881, p. 152.)

60. Pipino.—Treatment of Club Foot. (*Betz's Memo.*, 1880, p. 370.)

61. Pravaz.—The Etiology of Congenital Dislocations of the Femur. (*Gaz. de Hôpitaux*, June 11, 1881.)

62. Pye, Walter.—Deformity from Overgrowth of Ulna: Operation. (*Brit. Med. Jour.*, March 5, 1881.)

63. Rigal and Vignal.—Experimental Investigations into the Origin of Callus, and into the Changes in the Tissues of False Joint. (*Arch. de Phys.*, 1881, Nos. 3 and 4.)

64. Rivington, W.—Spasmodic Wry Neck: Excision of a Portion of the Spinal Accessory Nerve: Death from Erysipelas. (*Brain*, July 1881.)

65. Scarenzio.—Joint-Disease caused in a Reflex Manner by Urethritis. (*Giorn. Italiano del Mal. Vener.*, 1880.)

66. Servais and Deneffe.—Report of the Commission on a paper of Dr. Servais on Subcutaneous Division of the Neck of the Fermur in order to destroy Ankylosis of the Hip Joint in a Bad Position. (*Bull. de l'Acad. Roy. de Méd. de Belgique*, 1881, No. 5.)

67. Swain.—Hints on the Application of the Poro-

plastic Jacket in Spinal Curvature: Illustrated. (Reprint of a paper in the *Lancet*, 1880.)

68. TOURNEAUX and MARTIN.—A Contribution to the History of Spina Bifida. (*Jour. de l'Anatomie*, 1881, No. 1.)

69. TROMMSDORF.—The Poroplastic Jacket. (*Betz's Memor.*, 1880.)

70. TYSON.—Cross-Legged Progression. (*Lancet*, April 30, 1881.)

71. VARIOT, G.—Note on the Structure and Development of Subungual Exostosis of the Great Toe (with three illustrations.)

72. VIERORDT.—On Automatic Registration of the Gait. (*Centralb. für die Med. Wiss.*, No. 14. 1880.)

73. VINCENT, D. E. — Some Recent Works on the Osseous System. (*Rev. Mens. de Méd. et de Chir.*, Oct. 1880.)

74. VOLKMANN.—On Flat Foot in Young Children. (*Centralb. für Chirurgie*, Feb. 12, 1881; *Med. Times and Gaz.*, March 26, 1881.)

75. 'E. G. W.'—A Case of Talipes Equinus following Acute Rheumatism in a Girl, aged 6. (*Lancet*, April 23, 1881.)

76. WALDBURG. — Sayre's Plaster Corset. (*Memor.*, 1880, p. 324.)

77. WALSH, J. F.—Case of Pott's Disease in the Adult treated by the Plaster Bandage: Recovery. (*Phil. Med. Times*, March 12, 1881.)

78. WEBB, J. H.—Inflation of Devitalised and Carbolised Air as a Treatment of Spinal Curvature and Abscess. (*Australian Med. Jour.*; Abstract by W. Thomson in *Dublin Jour. of Med. Science*, 1881, p. 146.)

79. WILLETT and WALSHAM.—An Account of the Dissection of the Parts removed from the Body of a Woman the subject of Congenital Malformation of the Spinal Column, Bony Thorax, and Left Scapular Arch: with Remarks on the Probable Nature of the Defects in Development producing the Deformities. (*Med.-Chir. Trans.*, vol. lxiii.)

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3. *Baker on Congenital Talipes Equinus.*—The author describes a varus splint used by himself at the Royal Orthopædic Hospital, and differing from Tamplin's in the following points: 1, the addition of an inner wing; 2, the projection of both wings well below the foot-plate, with connecting strap; 3, the rigid toe-bar attached to the sole plate; 4, leather-padded ankle-strap: and 5 (the most important of all), the movable pad which forms the fulcrum.

19. *Desprès on False Joint.*—Desprès relates cases of ununited fracture in the lower limb, cured by applying an immovable apparatus, and permitting the patient to walk about with it. The paper (read at the Société de Chirurgie) was discussed by Lannelongue, Anger, and Trélat.

29. *Gould on Rapid Death after Osteotomy of the Tibia.*—The case occurred in a boy aged eight years. The author was of opinion, in which Mr. Lister concurred, that the cause of death was carbolic acid poisoning.

33. *Hackett on Fractured Spine treated by Sayre's Plaster Jacket.*—Dr. Hackett states, on October 15, 1877, in switching from a main track to a branch, the train going round a curve at a rapid rate, while he was standing in the rear of the car, he was violently thrown upon the corner of a stove, and instantly paralysed below the waist, probably by a fracture of one of the lumbar vertebræ, presumably the third. There were complete paralysis of motion in both legs, partial loss of sensation, a sense of constriction, as of a tight band, at the lower part of the abdomen, and incessant and severe pain at the point of injury. After ten weeks there was some return of sensation, with ability generally to evacuate the bladder voluntarily; and improvement in motor power, commencing about five months after the injury, had so far advanced by a twelvemonth after the injury, that 'the limbs could be drawn up and pushed down in the bed, and even be made to move as in walking, with the body supported on crutches and by an attendant; but only a trifling amount of weight could be sustained by them.' Numerous abscesses formed, discharging not only externally, but also through the rectum. Four or five pieces of bone escaped. These abscesses caused great suppuration and great pain, and also loss of ground as regarded recovery from the paralysis. Sensation was now almost annihilated, even the power of telling heat from cold. The muscles did not respond to electricity 'more than would those of a man recently deceased'. Under the use of iodide of potassium the abscesses healed, and electricity and friction, daily employed, benefited the patient, so that by the autumn of 1879, he says: 'I was able to get a part of my weight on my feet by supporting myself on crutches or over the back of a chair'. Still, he could only leave his bed for a short time, and not every day; and he was suffering all the time from intense pain, which compelled him to take from one to three grains of morphia daily, to keep even bearably comfortable. On November 30, 1879, Drs. Lewis A. Sayre and L. H. Sayre suspended him and applied a plaster-of-Paris jacket. 'The relief from pain and the improvement in the sensation and motion of the limbs produced by extension indicated the probability of benefit by this mode of treatment.' 'The result was a perfectly accurately fitting case, which gave perfect and even support to the whole trunk, and complete and absolute rest to the injured and diseased parts.' Three days afterwards, he could walk about the room without mechanical support, and two days later went out in the street for his first walk for more than two years. Sensation became nearly normal, the frequent muscular spasms entirely ceased, control of the bladder became perfect, and the action of the bowels became much more nearly normal. The limbs recovered their natural warmth. In six weeks' time he was able to reduce his daily allowance of morphia to less than half what it had been. He was able to walk as much as a quarter of a mile without artificial aid of any kind, except the *moral* support of a light bamboo cane. Dr. Hackett writes: 'On removing the jacket, January 13, I found myself unable to walk across the room without support of some kind, while there was a marked increase of pain. There was also a perceptible change in the form of the trunk, it being two inches smaller around the waist, probably by absorption from lateral pressure of the jacket above the ilia, where it had been crowded in to get a point of support to maintain extension. Upon the application of a new plaster case, there were immediate relief of the increased pain and return of the use of the legs as before, with considerable improvement in their action (the new jacket being a better fit than the first, if possible), showing most clearly the need of and the great benefit derived from the extension and support of the plaster-of-Paris jacket.' On February 1, Dr. Hackett writes: 'I can now raise myself on the toes by voluntary contraction of the extensor muscles of the feet'.

49. *Macewen on Transplantation of Bone.*—Before Macewen's experiments, the only authentic instance of successful transplantation of bone was that in which Ollier exchanged pieces of the radial diaphysis in a rabbit eight months old. Immediate and perfect union ensued in the right radius, but in the left suppuration set in and the bone wasted, leaving

the periosteum adherent and ossifying. In March 1874, Dr. Macewen 'transplanted a portion of one of the flat bones of the canine skull into a gap in the skull of a man. Two-thirds of the graft remained in the tissues, apparently becoming incorporated with them, and forming a firm hard layer. No opportunity was afforded of demonstrating by an incision the exact condition of the graft.' Dr. Macewen, in an historical *résumé*, says that the position of transplantation of bone is as follows. 'In the lower animals, Ollier has transplanted periosteum and osseous tissue; and, among many failures, he succeeded in one instance in forming an osseous ring from grafted periosteum, and in another in transplanting a portion of bone from the one radius to the other of the same animal. Wolf, of Berlin, repeated Ollier's experiments, and stated that he never obtained an osseous growth from any transplant. In man there have been several attempts to transplant periosteum and bone, which, with one exception, have been attended with failure. The exception—the case mentioned of grafting dog's bone into a human skull—has not been clearly demonstrated.' The problems to be solved were these. 1. Will bone grow after transplantation? 2. Are the facts derivable from animals applicable to man? 3. If the first two questions be answered in the affirmative, can any practical result ensue? Dr. Macewen, in his surgical practice, met with various facts tending to encourage hope concerning the transplantation of bone. In various cases of compound fracture treated antiseptically, pieces of bone, some with and others without periosteum, having been entirely separated, were replaced either in their original position or in a different locality, lived, and grew. Portions of fingers and toes have re-united after being completely detached. In proceeding to experiment, it was determined that the graft should consist of the whole of the osseous elements, periosteum, calcareous matter, and medulla. 'In order to place transplanted bone in the most favourable condition for living, it ought to be divided into small pieces, so that the blood effused from the intermuscular space into which the bone would be implanted, may permeate between the individual fragments, and thereby afford a medium for the establishment of vascular connections, and the supply of nutriment to the individual pieces of bone. Moreover, any portion of the graft which was not suitable could then be easily thrown off without involving the whole. Other grounds for the division of the osseous transplant into small portions are as follow. The blood-clot itself, when small in quantity, forms an excellent matrix for the proliferation of the steogenic elements. The division of the bone into small pieces also supplies a greater number of proliferating centres. The division of the hard calcareous walls of the Haversian canal, gives the osteogenic cells therein contained room to proliferate; and the graft, when composed of small portions of bone, can be more easily moulded into the shape desired.' The author then relates a case in which transplantation was successfully performed. The whole shaft of the right humerus having necrosed in a weakly neglected child three years old, and the strength diminishing, while the local state showed no improvement in spite of treatment, it was determined to remove the sequestrum. 'The tunnels left by the withdrawal of the bone were kept patent as long as possible, but they slowly coalesced from the epiphysis toward the superficial openings without the formation of new bone, except for a short distance from the head of the humerus.' In December 1878 (five months after admission into hospital), there was no sign of any attempt to restore the lost diaphysis, other than a downward growth of about 1¾ inches from the head of the bone. The measurement to the acromion from the apex of this growth, which tapered downwards, was 2 inches. The child was seen monthly for some time, but no further growth of bone followed. On November 7, 1879, nearly a year and three months after the removal of the necrosed shaft, the bone had grown no more. On November 9, the first transplantation was performed. To quote from the author's own *résumé*, 'In making the sulcus for the reception of the graft, reliance had to be placed on the anatomical relations as to the correct position for the graft, as there was no trace of periosteum or of fibrous structure to indicate the former situation of the bone. Portions of human bone were transplanted on three different occasions. The grafts were obtained from patients affected with anterior tibial curves, from whom wedges of bone had to be removed for the purpose of straightening their limbs. These osseous wedges, with their periosteum, were each divided, after removal, into many small pieces, which were immediately placed in the sulcus prepared for them in the boy's arm. These small portions united together and adhered to the head of the humerus above and the condyles below, ultimately forming a solid rod, only half an inch shorter than the humerus of the opposite side. The transplantation of bone converted an useless arm into a thoroughly useful one.' In reply to critics who suggest that the transplants merely stimulated remanent old periosteum to produce the new bone, it is pointed out that (1) for fifteen months no new bone grew; (2) no signs of old periosteum were discovered when the groove of soft tissues was made to receive the grafts; (3) the growth of new bone was at first only commensurate with the transplants; (4) the solid humerus still retains the irregularities of shape which the transplants were permitted to assume in the tissues. The author finally states the following conclusions: 1. Transplanted bone is capable of living and growing. 2. Interhuman transplants of bone live and grow. 3. Interhuman osseous transplants are capable of being put to practical uses beneficial to mankind. 4. The whole of the osseous elements ought to be included in the transplants. 5. The most successful mode of transplanting bone is to divide it into small fragments with a sharp instrument before inserting it into its new situation. 6. In order to insure the success of the graft, the transplantation must be conducted antiseptically.

53. *Morton on Club-Foot.*—At a meeting of the Philadelphia Academy of Surgery (*Phila. Med. Times*, June 29, 1881), Dr. Morton exhibited some cases of club-foot treated, from soon after birth, by manipulation and 'the wearing of proper shoes', without tenotomy. The results were good. In cases seen in infancy he attempted, and was usually able, to cure the talipes without tenotomy, except in some instances of talipes equinus. When he was obliged to divide the tendo Achillis, he did not do it until the child began to walk. In the discussion which followed, Dr. S. W. Gross thought the ordinary method of operating useless, and the usual method of applying the shoe, a barbarity; still he believed that division of the tendo Achillis was preferable, because it hastened cure. The varus should be overcome by manipulation first, and the heel then brought down. After manipulation had been begun, the foot may be kept in place by adhesive plaster carried around the

foot and up the leg. Dr. D. Hayes Agnew considered no operation wise at an earlier age than one year, but in the meantime it was well to correct deformity and develop the paralysed muscles by manipulation.

54. *Morton on Complete Osseous Ankylosis of Knee treated by Removing a Wedge of Bone.*—Dr. Morton writes, in the course of remarks on this case (*Phil. Med. Times*, March 12): 'It has now become a common procedure in my practice, in treating different angular deformities with ankylosis at the hip, after anæsthesia, to have the pelvis well secured, then to forcibly fracture the neck of the femur, and then to apply extension in a straight positon, and treat it as an ordinary fracture. This has, in a large number of cases, replaced excision, simple section, and other modes of treatment, and I have never had any unfavourable symptoms arise, but good has been the invariable result'. [It is most desirable that the whole of these cases should be published in detail. —*Rep.*]

62. *Pye on Deformity from Overgrowth of Ulna.* —The author (*Brit. Med. Jour.*, March 5, 1881) considers the case to be pathologically related to osteitis deformans. The curvature began to return shortly after the operation of osteotomy.

66. *Servais and others on Subcutaneous Division of the Neck of the Femur for Ankylosis.*—A committee of the Belgian Royal Academy of Medicine has sent in the following interesting and critical report on a case of Adams's operation of 'subcutaneous section' of the neck of the femur for rectangular ankylosis of the hip. 'A young man, aged 23, with one hip ankylosed in a bad position, came to M. Servais to have the condition remedied. When standing erect, he could not touch the ground with the toes of his left foot, unless his back were enormously hollowed. When lying supine with the back flat, the left thigh was perpendicular. Walking was difficult. He had borne with his deformity for twenty years, but in 1879, he wished to marry, and love brought him to the consulting-room of M. Servais, who proposed to him the operation. (Then follows a brief history and description of Adams's operation.) In M. Servais' operation, the section of the bone by sawing occupied three-quarters of an hour. The limb was afterwards placed *dans une position physiologique*, and over the wound was applied a compress wet with a solution of arnica (6 to 100). The limb was enveloped in plaster-wadding ('gypso-ouaté'). This dressing was removed in five days, and extension was resorted to. All went well for twenty days, when the patient became intractable, got up without leave, and a serious accident resulted. The fragments of the freshly divided femur wounded either the femoral artery or one of its large branches, and an alarming hæmorrhage came on. Informed of this occurrence twelve hours afterwards, M. Servais, without hesitation, tied the femoral artery below Poupart's ligament. The hæmorrhage ceased, but another danger supervened. Blood was extensively infiltrated, the patient was weak, and inflammation attacked the thigh. Large incisions, drainage, and an internal treatment by tonics, successfully combated this inflammation; the patient was saved. Towards the end of the second month, M. Servais applied Taylor's apparatus; on the seventy-fifth day the patient left his bed. From the sixth month the young man's condition was excellent. The success of the operation was henceforth undeniable. The deformity has gone, the man walks without limping and without apparatus; the limb has developed since the operation. The union of the fragments is very firm; but, from time to time, a small opening appears, and gives egress to a few fragments of bone. The general state is better than before the operation. For more than a year, the young man has resumed his work as a lapidary. If this operation shows the ability of the operator, it shows also the dangers which the operation caused this young man to run. If we add to his risks a case of death from purulent infection, and another case of death from hæmorrhage, resulting from a wound of the femoral artery, it will be seen, perhaps, that for a list of fifty cases of 'subcutaneous division of the neck of the femur', the account of accidents which may complicate this operation is already serious. The committee are astonished that this deformed ankylosis of the hip, existent throughout the period of growth and of development, has not brought with it a shortening of the limb, capable of impeding walking, in spite of the operation. We regret that in his work, unfortunately very curtailed, the excellent English surgeon has told us nothing about this point. Without accepting, concerning the benignness of "subcutaneous section of the neck of the femur", the opinions of MM. Adams and Servais, the committee judge that this operation is indicated in the cases where a vicious ankylosis of the hip makes the limb useless. But the surgeon ought to be well persuaded, and he should not permit the patient or his friends to remain ignorant that the operation is serious, and he should only operate when asked. In the case of deformed ankylosis of the hip, surgeons have put in practice, for many years, a method less dangerous than that of Adams, viz., fracture of the neck of the femur. Nélaton, Péan, Tillaux, and many others, have been most successful with it. We are the more compelled to recall this success, because it has been gained with less risk to the patients.' [In the course of the subsequent discussion, it appeared that the committee had never seen the patient whose case is the subject of the report.—*Rep.*]

67. *Swain on the Application of the Poroplastic Jacket in Spinal Curvature.*—This pamphlet contains a useful account of the method of applying Cocking's poroplastic jackets. It informs us that 'his' (Mr. Cocking's) 'attention was drawn to Prof. Sayre's plaster-of-Paris jackets, and he conceived the idea that his poroplastic felt might be used for the purpose of forming spinal supports, having this great advantage over the plaster-of-Paris jacket, viz., that of being easily removed from the patient, and re-applied'. [As a matter of fact, the plaster-of-Paris can be removed and re-applied quite as often as is good for the patient, and with perfect ease, provided only that use be made of the system of triple-lacing, long ago introduced by the reporter into Mr. Marsh's out-patient department at St. Bartholomew's Hospital.—*Rep.*] Further on, the author tells us that 'herein is the special advantage of this method of spinal support, that its use does not preclude the further use of other curative methods. I allude especially to extension by suspension and gymnastic exercises'. [This is an assumption which has been made by other surgeons besides Mr. Swain, but which can only be based on defective knowledge of what is consistent with Sayre's plaster-of-Paris jacket. The plaster jacket can easily be removed, and both suspension and gymnastic exercises can be freely used without removing it at all.—*Rep.*] By far the greater part of Mr. Swain's pamphlet consists of practical directions and warnings regarding

the use of the poro-plastic apparatus. Measurements are to be taken at the axilla, the waist, the pelvis, and from the axilla to the great trochanter, as well as accurate notes of the position of the curve, especially if angular, and of such bony processes as the anterior superior spine of the ilium. The upper and lower borders and the area over the breasts, are to be left soft. The patient is prepared much as for the application of the plaster corset, but with two jerseys, and without cotton-wool pads. Instead of a collar for suspension, a broad piece of soft felt is used beneath the chin, with a felt strap and a buckle passed round the back of the head. 'Care should be taken not to double up the ears under the strap, and I find that a little cotton-wool here and there adds to the comfort.' When a jury-mast is used, care must be taken 'that the iron rod of the jury-mast does not take a too prominent anterior curve just above the jacket. If this be the case it will press on the occiput, and very soon cause a troublesome sore.' In the absence of a proper steam-bath, the kitchen oven, with a crock of boiling water in it, may be used to soften the jacket. If the oven be used, a little water should also be sprinkled over the jacket. The temperature should be about 170 deg. to 180 deg. 'Although the felt very soon becomes soft, it does not become thoroughly plastic for some little time.' Two persons are required to fit the jacket well. 'The surgeon should take charge of the back.' 'The middle buckle, which will be generally found to tighten the jacket round the waist, is the first and most important one to secure.' 'The pelvic buckles should be the next closed, and, lastly, the thoracic ones.' 'During all this time the surgeon is moulding the jacket to the form posteriorly.' The author has 'found, after some practice, that the best way to accomplish this is to encircle the patient with an arm, placing one hand in front as an opposing force, whilst with the other hand you knead the material into the figure, using principally the ball of the thumb'. 'I have found that a slight knock on the jacket with the knuckles tells me if it is "well home".' 'To insure a perfect fit at the waist, the assistant encircles the jacket at that point with a strap of soft felt, by which he is able forcibly to squeeze it into the figure.' The patient must be kept perfectly still for half an hour after the application, in order to let the jacket become quite firm. The after-treatment is of great importance. This involves frequent removal of the jacket for exercise. It should always be re-applied during suspension. Daily suspension is used. For some time, the jacket is worn night and day. From time to time the jacket should be re-moulded.

74. *Volkmann on Flat Foot in Young Children.*—Volkmann (*Centralb. für Chir.*, Feb. 12, 1881) classifies flat foot occurring in young children under three heads: 1. Congenital, dependent upon uterine pressure; 2. A form due to too rapid change into the position of the adult foot; 3. Rachitic flat foot, appearing sometimes before the child begins to stand; 4. Paralytic flat foot. C. Hueter is of opinion that the alteration of the shape of the foot from the slight supination seen in a new-born child into that seen in the adult, is the result of the pressure due to the weight of the body. The axis of the astragalo-calcaneal joint is so placed, that the weight of the body in walking tends to evert the foot. Volkmann rejects the idea that this fact is the cause of the flat foot of children, for the reason that this eversion takes place before children learn to stand, and in the first months of life the foot may be in a position more pronated than is normally seen in adults; and he concludes that, under ordinary circumstances, the weight of the body in walking and standing has nothing to do with this change of shape of the foot. In newly born infants the bones have a different shape from that of adults, and the changes which occur during growth are independent of static laws. As an example of changes in the growth of the limb which take place in opposition to the effect from the weight of the body, the increase in the angle of the neck of the femur with the shaft may be quoted, and also the hollowing out of the arch of the foot. There is, however, a form of flat foot which has been termed 'static flat foot', where, in addition to the eversion, a sinking of the arch is to be seen. This change is distinct from that which causes eversion, and which is dependent upon similar influences to those which, working in another direction, prevent in talipes varus and equino-varus the partially corrected deformity from remaining without relapse if the acts of standing and walking alone be relied upon.

78. *Webb on Inflation of Devitalised and Carbolised Air in Spinal Curvature and Abscess.*—The author (*Australian Med. Jour.*) recommends the treatment named in the title. He places crystalline carbolic acid in a Florence flask, melts it, and then forces air through the acid and into the abscess-cavity with a Richardson's spray producer.

C. B. Keetley.

PATHOLOGY.

RECENT PAPERS.

1. Senator.—Case of Acute Miliary Tuberculosis with the Distinct Type of Typhoid Fever. (*Berl. Klin. Woch.*, June 20, 1881.)

2. Orth.—Connection of Pulmonary Consumption with Acute Miliary Tuberculosis, and with Tuberculosis in General. (*Berl. Klin. Woch.*, Oct. 17, 1881.)

3. Quincke. — Œsophageal Ulcer from Digestion. (*Deutsches Archiv für Klin. Med.*)

4. Edge, A. M.—Hydatid Tumours in the Liver of a Child. (*Lancet*, Oct. 1881, p. 747.)

5. Cockle.—On Malignant Disease of the Lung. (*Med. Times and Gaz.*, Oct. 1881, p. 518.)

6. Desplats.—On Lymphadenoma of the Mediastinum. (*Jour. des Sciences Méd. de Lille*, Aug. 1881.)

7. Chiari.—Cystosarcoma of the Parotid Gland with Metastases in the Lungs. (*Wiener Med. Jahr.*, 1881, Heft i.)

8. Chiari.—Development of Lymphatic Disease in the Urinary Passages. (*Ibid.*)

1. *Senator on a Case of Acute Miliary Tuberculosis exactly simulating Typhoid Fever.*—Senator details in the *Berl. Klin. Woch.* (June 20, 1881) the case of a male patient, aged 42, a messenger, who had all the appearances of typhoid fever (including rose-coloured spots), but *post mortem* was found to have been suffering from generalised miliary tuberculosis, the Peyer's patches being unaffected. He had been in the hospital before for severe typhoid fever, from Sept. 25, to Nov. 5, 1877, and was discharged cured; well in the interval. In the first days of Sept. 1880, he was taken with slight shivering, pains over the liver, and dyspnœa, and was several days in bed. Afterwards, he had weakness, loss of appetite, and feeling of fulness in the epigastric region These symptoms increased ten days before his admission, and the pains over the liver especially so.

There was no jaundice, nor fever. His family history was good. He had had no previous illness until the before-mentioned typhoid; and had led a temperate life. On admission, he was a fairly well-formed and well-nourished man, with no appearance of cachexia. The epigastrium was painful on deep pressure, especially towards the right. Neither the spleen nor the liver were enlarged; there was nothing unusual in the circulatory and respiratory systems (no cough nor expectoration); tongue coated white and moist; constipation; the urine not albuminous, cloudy from urates. Pulse 80 to 84. Temp. 100.4 F. Four days after (Oct. 29), he had moderately high fever, with considerable remissions in the morning; the spleen was enlarged. On Oct. 31, there were observed for the first time several quite distinct roseolar spots. Next day, there were more spots; the abdomen was distended; he had bleeding from the nose, and, on Nov. 16, much bleeding from the nose and mouth. On Nov. 17, on the back of the right hand were several painless patches of erythematous redness, of the size of a florin. For the three or four days preceding death, there were cyanosis, and swelling of the left parotid gland; and pus was expressed from the duct. Death occurred on Nov. 22. The fever-curve, swelling of the spleen, and rose-coloured spots led to a diagnosis of typhoid fever. No doubt, he had had typhoid three years before; also the morning remissions of the temperature were extreme, and in the fourth or fifth week the high temperature still continued. At that time, miliary tuberculosis was thought of, and the fundus of the eye was searched for tubercles unsuccessfully. Finally, when suppuration in the parotid occurred shortly before death, all doubts about the case being one of typhoid disappeared. *Post mortem*, there was not a trace of typhoid fever, nor any evidences of the typhoid three years before. But there were miliary tuberculosis of both lungs (the lung-substance being otherwise normal, except in the upper lobe on each side, where there was an indurated and contracted spot), tuberculosis of the bronchial glands, which were much enlarged and partly caseous, of the spleen, of both kidneys, and of the liver. The head was not allowed to be opened. The second part of the communication is occupied with a discussion of the case, and of the already recorded cases that come nearest to it.

2. *Orth on the Connexion of Pulmonary Consumption with Tuberculosis.*—Orth of Göttingen discusses in the *Berl. Klin. Woch.* Oct. 17, 1881, the question of the connexion of pulmonary consumption with acute miliary tuberculosis, as well as with tuberculosis in general. In the experiments (recorded in Virchow's *Archiv*, vol. lxxvi, 1879) whereby he produced a tubercular disease in rabbits by feeding them for a considerable period with the so-called pearl nodules from tuberculous cows, he found that the induced tuberculosis existed in various organs, and that in the lungs it was associated with, and, in fact, somewhat overshadowed by, caseous pneumonic processes, both catarrhal and croupous. He regards these pneumonic conditions, found side by side with tubercles, as belonging to the infective process. He would accordingly interpret the morbid appearances in the phthisical human lung by the light of that experimental evidence, and take both the interstitial tubercles and the extensive caseous pneumonic processes associated with them, or either of those conditions by itself, as due to tuberculous infection. He inclines to think that there is a specific tuberculous virus, which may be of an 'organised' nature, and he would place tuberculosis side by side with typhoid fever, the septic processes, etc., in the intense forms of which nodular formations in various organs are found, while they are wanting in the milder forms, and also beside diphtheritis, which shows its effects in equally various ways. He also recognises the often quoted analogy between tuberculosis and syphilis. It would be as fallacious to conclude that tubercle-nodules are the only sure criterion of tuberculosis, and that where there are no tubercle-nodules there is no tuberculosis, as to conclude that gummata are the only sure criterion of syphilis, and that there is no syphilis where there are no gummata. C. CREIGHTON, M.D.

3. *Quincke on Œsophageal Ulcer from Digestion.*—Professor Quincke of Kiel published some time since observations to show that ulcers may occur in the œsophagus from the action of the gastric juice. Three cases are now (*Deut. Archiv für Klin. Med.*) published in support of this. 1. The first case was that of a patient suffering from cancer of both ovaries. The ulcer was in the lower part of the œsophagus; and in this, as in the other cases, the absence of cancer at the spot was proved by microscopic examination, as was also the possibility of corrosion *ante mortem* or digestion *post mortem*. 2. The second was that of a patient affected with ovarian cyst, in whom an œsophageal ulcer in the lower half had perforated into the right pleural cavity. 3. The third case was that of a man, 50 years of age, cachectic, and to all appearance suffering from cancer. The *post mortem* examination, however, showed the cause to be marked narrowing of the œsophageal opening of the stomach by a cicatricial stricture, evidently the remains of a previous ulcer involving the neighbouring mucous membrane, and giving rise to muscular hypertrophy of the œsophagus and chronic swelling of its mucous membrane. JAMES ANDERSON, M.D.

4. *Edge on Hydatid Tumour in the Liver of a Child.*—Dr. A. M. Edge, in the *Lancet*, October 1881, p. 747, reports the case of a child, aged 4 years, who was admitted into the Southern Hospital at Manchester, with a tumour in the region of the liver, which was aspirated, and proved to be of hydatid origin. In two months all trace of the cyst had disappeared. Dr. Edge concludes his paper with a history of similar cases. [A case is reported in the LONDON MEDICAL RECORD, Aug. 1878, p. 349, in a child, aged 3½ years.—*Rep.*]

5. *Cockle on Malignant Disease of the Lung.*—In the *Med. Times and Gaz.*, Oct. 1881, p. 518, Dr. Cockle reports an interesting case of cancer of the left lung in a cook, aged 44, who, two months before admission, caught a severe cold, attended with cough, and pain in the left side. About a teaspoonful of blood was expectorated at this time, and the sputa remained tinged for some days subsequently. The patient was a fairly healthy-looking woman on admission, but stated that during the last six months she had lost nearly three stone in weight. There was absolute dulness over the whole of the left chest, and the heart was displaced downwards and to the right. Temperature was from 98 to 100 deg.; respiration, 30 to 50. At the end of two months the chest-symptoms remained unaltered, and, a week before death, she began to improve; her appetite came back, and she rapidly gained flesh. One day whilst sitting on the night-stool, she suddenly died. At the necropsy, a large cancerous mass was found occupying the position of the left lung, having started

from its root, and growing along the bronchi (both inside and out). The left pulmonary vein was obliterated, and filled with the growth. The pericardium was full of dark fluid-blood, the origin of which it was difficult to trace. A large mass of cancerous growth was found in front of the left kidney, growing apparently from the lumbar glands. The perfect latency of all abdominal symptoms, with so large a mass of cancer growing therein, was, to say the least, very remarkable. The sufferings were always exclusively referred to the chest.

RICHARD NEALE, M.D.

6. *Desplats on Lymphadenoma of the Mediastinum.*—A woman, aged 27, admitted to the Sainte-Eugénie Hospital at Lille, on Sept. 12, 1877 (*Jour. des Sciences Méd. de Lille*, Aug.), had intense dyspnœa, signs of asphyxia, and absolute dulness before and behind, throughout the whole of the left side of the chest, with deviation of the heart to the right. Thoracentesis gave issue to two litres of liquid, and relieved the patient, but did not remove the subclavicular dulness of the left side. On the right side, resonance was normal, but there were a souffle and egophony at the base in front and behind. The heart had deviated to the right. In the right subclavicular fossa a voluminous mass of hard indolent glands was noted. Those of the left clavicular fossa were less tumefied. The urine was loaded with albumen, and the mucous membrane of the mouth was the seat of deep and extensive ulcerations. On the 15th, a fresh puncture was made, after which general improvement was noted. On the 26th, asphyxia again appeared, and the patient died on October 2. At the necropsy, a white hard mass was found filling the left pleural cavity; it had pushed downwards the whole of the left lung. The other viscera did not show any special change. Microscopical examination of the tumour showed that it was constituted by stelliform connective elements, forming by their anastomoses a stroma of which the meshes surrounded the lymphatic cells. Histological examination, therefore, left no doubt of the existence of a lymphadenoma of the glands of the hilus of the left lung.

7. *Chiari on Cystosarcoma of the Parotid with Metastases in the Lungs.*—H. Chiari (*Med. Jahr. der K.-K. Gesell. der Aerzte zu Wien.*, 1881, Heft 1) describes a case of that tumour called cystosarcoma phyllodes, by Müller. It was taken from the parotid gland. Twenty days after the operation the patient died of facial erysipelas and bilateral pneumonia, and at the necropsy the lungs were found to be studded with metastatic patches of the same nature as the tumour.

8. *Chiari on the Development of Lymphatic Tissue in the Urinary Passages.*—The author (*Med. Jahr. der K.-K. Gesell. der Aerzte zu Wien.*, 1881, Heft 1) records eight cases in which lymphatic tissue was found throughout the mucous membrane of the urinary system. One case was tuberculosis; the next, suppurative nephritis; the third, croupous pneumonia; the fourth, peritonitis; the fifth, a scalp wound; the sixth, pneumonia with universal syphilitic glandular swellings; in the seventh case, the cause of death is not given; and the last was a case of Bright's disease. In health, there are no lymphatic tissues in the mucous membrane of the urinary tract, and, from its presence in these cases, Chiari thinks that it may arise under abnormal conditions.

G. A. GIBSON, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

1. SCHERPF.—On the Etiology and Symptomatology of Mental Diseases in Children. (*Jahr. für Kinderh.*, vol. xvi, pt. 3 and 4.)

2. HIRSCHSPRUNG.—A Peculiar Localisation of Acute Rheumatism in Childhood. (*Ibid.*)

3. DEMME.—Pilocarpin in Scarlet Fever and Diphtheria. (*Ibid.*)

4. FÖRSTER.—On the Management of Fever in Children. (*Ibid.*)

5. VOLLBRECHT.—On Vaccinal Erysipelas. (*Ibid.*)

6. COEN.—Anomalies of Speech in Childhood. (*Archiv. für Kind.*, vol. ii, pt. 8 and 9.)

7. FILATOFF.—On Benzoate of Soda in Diphtheria. (*Ibid.*, pt. 6 and 7.)

8. SEILER.—Ascites in Childhood. (*Berlin. Klin. Woch.*, June 27, 1881.)

9. STRANGE.—Notes of 100 cases of Chorea. (*Brit. Med. Jour.*, July 16 and 30, 1881.)

10. BYERS.—Rötheln, its Symptoms and Nosological Position. (*Ibid.*, July 16.)

11. EDIS.—Hints for Travelling in the case of Children. (*Ibid.*, July 30.)

12. KENNEDY.—Observations on Whooping-cough. (*Dub. Jour. of Med. Sci.*, Sept. 1881, p. 247.)

13. FILATOFF.—On the Etiology and Diagnosis of Acute Peritonitis of Children. (*Lancet*, April 30 and May 7.)

14. PARKER.—Remarks on the Curvatures of the Long Bones in Rickets. (*Med. Times and Gaz.*, April 2, 1881.)

15. TREVES, F.—On Strangulated Congenital Hernia. (*Lancet*, Feb. 1881, p. 323.)

16. GREEN, W. E.—On Cerebral Pyrexia in Children who have been exposed in paddling at the sea-side. (*Practitioner*, Feb. 1881, p. 100.)

CLINICAL RECORDS OF CHILDREN'S DISEASES.

Aneurism of Abdominal Aorta in a Fœtus obstructing Birth. Dr. Phänomenoff. (*Archiv. für Gyn.*, Band xvii, p. 133.)

Primary Sarcoma of Vagina and Secondary Affection of the Bladder: aged 2½ years. Dr. Soltmann. (*Jahr. für Kind.*, March 1881.)

Necrosis of the Cranium: 4½ years: with observations. Dr. Anders. (*Ibid.*)

The Degeneration of Lymphangiomata, illustrated by a case, with remarks. (*Ibid.*)

Infiltration of Urine from Urethral Concretion in a boy 1 year and 9 months old. (*Ibid.*)

Two Cases of Abnormal Formation of the Extremities.

Two Cases of Atropia Poisoning in Children aged 4 years and 8 years, from application to the eyes: treated with Pilocarpin. Dr. Fanzler. (*Ibid.*)

Two Cases of Renal Cancer in Children, aged 6 and 7 years, Secondary Deposits in the Liver, Lungs, and Lymphatic Glands in one case. Prof. Wiederhofer. (*Ibid.*)

Spina Bifida: Girl: Tumour as large as child's head: Removed: Recovery. Mr. Pye, Victoria Hospital for Children. (*Brit. Med. Jour.*, July 9, 1881.)

Hepatotomy for Hydatids of Liver: Girl, aged 7 years: Abdomen opened, cyst aspirated: edges of wound in liver secured to integuments: Treatment by drainage-tubes: non-antiseptic: Recovery. Mr. Lawson Tait. (*Ibid.*, July 16.)

Two Cases of Abdominal Abscess as a result of Enteric Fever: Girls, aged 5 years and 7 years: both 'scrofulous'; both abscesses in umbilical region: one burst externally, the other into bowel: both recovered. Dr. Bruce Low. (*Ibid.*, July 23.)

Rapidly Developed Unilateral Ataxy: Girl, aged 3½ years. Dr. Drummond. (*Ibid.*, July 30.)

Cases of Congenital Morbus Cordis. Dr. Semple, North-Eastern Hospital for Children. (*Med. Press and Cir.*, Aug. 10, 1881.)

Two Cases of Hodgkin's Disease: Boys, aged 8½ years, 2¾ years: Fatal: Details of course and necropsies. Drs. Baxter and Taylor, Evelina Hospital. (*Lancet*, July 9.)

Acute Idiopathic Pericarditis: Boy, aged 11 years: severe pain preceding physical signs: Recovery. Dr. Day, Samaritan Hospital. (*Ibid.*, July 16.)

Three Cases of Acute Suppurative Arthritis in Infants. Mr. Wright, Children's Hospital, Pendlebury. (*Ibid.*, July 23.)

Poisoning by half a grain of Sulphate of Atropia: Girl, aged 2 years: treated with emetics: Recovery. Mr. Fitzmaurice. (*Ibid.*, Sept. 3.)

Ulcerative Enteritis, without Pyrexia: Perforative Peritonitis: Death: Girl, aged 2¾ years. Dr. Grigg, Victoria Hospital. (*Med. Times and Gaz.*, Sept. 24.)

Hysterical Contraction of Left Leg and Foot, without disturbance of sensation or convulsions: Girl, aged 12 years: Recovery. Dr. Finlay, Middlesex Hospital. (*Ibid.*, Sept. 17.)

Retro-Pharyngeal Abscess in Infant 5 weeks old: cause obscure: ulceration into left external carotid artery: Death from hæmorrhage. Dr. Carmichael. (*Edin. Med. Jour.*, July 1881.)

Occlusion of Small Intestine in New-born Child: continuity of Ileum in upper fifth interrupted by ribbon-shaped band of fibrous tissue, ½ in. in length and width: intestines ending in closed ends above and below this obstruction. Dr. Craig. (*Ibid.*, Aug.)

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1. *Scherpf on the Etiology and Symptomatology of Mental Diseases in Children.*—In an exhaustive and valuable article (*Jahrb. für Kinderheilk.*, vol. xvi) Dr. Scherpf treats of the etiology and symptoms of mental disturbances in children. Premising that psychical activity is bound up in the structural nerve-elements, he concludes that mental disease has a somatic cause, and that some organic alteration exists, although it may not always be found; and that moral causes are not to be spoken of in opposition to physical ones, since the former act through the latter. The causes are usually to be divided into predisposing and accidental; and, though not always to be distinguished in every case, an undoubted connection exists between them. Quoting from Emminghaus, he says, 'The longer and stronger these causes have been in action, the more trifling may be the immediate cause determining madness; and when the morbid tendency is very strong, the normal course of life appears to be sufficient to bring about the disturbance.' The following are the causes mentioned by the author, each being treated in considerable detail. 1. *Heredity.*—In connection with this, the following propositions may be affirmed. (*a*) Mental diseases stand in genetic relationship to nervous diseases. Almost all mental, nervous, and cerebral diseases are varieties of a common species, and may give rise one to the other in the course of their descent. (*b*) Diseases may miss generations (atavism). (*c*) The morbid inheritance is not stationary while it lasts, although it may manifest itself similarly in several generations. Generally, heredity acts in proportion to the strength of its factors, and becomes intensified when these factors accumulate, and diminish as the opposite condition is brought about. In most cases of hereditary taint it is not the disease itself, but the predisposition, that is propagated, producing individuals possessed of neuropathic and psychopathic constitutions. 2. *The bringing up.* 3. *Injuries to the head.*—These may lead to immediate mental disturbance, or only after an interval. 4. *Psychoses of long duration*, which are developed in consequence of a bodily disease, are not frequent in childhood, although at that age there is a great liability for the cerebral functions to be disturbed by slight morbid conditions. Such disturbances mainly act by affecting the vascularity of the brain, and it is found that cerebral anæmia is a more frequent cause of mental affections than hyperæmia. The most severe symptoms may so arise, and disappear as quickly as they appeared. Chorea and epilepsy, hysteria and hypochondriasis, are in this group. 5. *The psychoses which accompany acute febrile diseases*, and occur either at the beginning or height of the malady, or during the inanition of the brain in the stages of defervescence or convalescence; the mental disturbance in the former case being maniacal in character, and in the latter milder and subdued in form. 6. *Constitutional and chronic diseases*, as tuberculosis, lead to mental disturbance; and also entozoa. 7. *Influence of sexual development.* 8. *Imitative instinct*, including religious mania. 9. *Toxic psychoses*, as from opium, belladonna, santonin, chloral, etc. The portion of the article devoted to symptomatology does not admit of condensation, and would well repay perusal. An extensive list of references is appended.

3. *Demme on Pilocarpin in Scarlet Fever and Diphtheria.*—Professor Demme, in a long contribution (*Jahrb. für Kinder.*, vol. xvi), continues the record of his observations on pilocarpin in scarlet fever and diphtheria, commenced in 1877. The conclusions at which he arrives are as follows. 1. The variable results in the observed action of muriate of pilocarpin is due to the presence with it of a second alkaloid, jaborin, resembling, according to Harnack and Meyer, atropia in its physiological action, as the pilocarpin is more like nicotin. 2. When a rapid effect is wanted, it is best administered hypodermically in doses of 1-60th to 1-24th of a grain under a year old, and 1-12th of a grain up to ten years. When given internally, the dose should be two or three times larger, with gum acacia to prevent diarrhœa. These quantities may be increased and repeated if a continuous effect be desired. 3. To prevent the vomiting and collapse which occasionally follow the subcutaneous injection, cognac, wine, strong tea or coffee, or ether, hypodermically, may be previously given. Similar stimulants are recommended when the drug is given by the mouth. The cardiac depression, which may amount to general collapse, with temporary loss of consciousness, and Cheyne-Stokes' respiration, which are liable to follow too large or too frequent doses, require stimulants. 4. Different individuals, and the same individual at different times, vary in their susceptibility to the action of the drug; and a vicarious relation between diaphoretic and sialagogue action is occasionally observed. 5. As a part of the general activity of the secretions, a marked expectorant effect, and in some cases an abundant flow from the nasal, laryngeal, and tracheal mucous membranes, occurs. Another less constant effect at the height or end of the diaphoresis, is increased urinary secretion, due to the increased blood-pressure, the rapidity of flow in the glomeruli, and, perhaps, also to an effect of the drug on the renal vaso-motor nerves, or even on the floor of the fourth ventricle. 6. The superficial erythema, perceptible at the beginning of the sweating, is due to irritation of the peripheral vessels. 7. In cases of scarlet fever, where the rash is delayed or incomplete, and where, at the same time, there are severe cerebral symptoms, an energetic diaphoresis by injection of pilocarpin most rapidly removes

the scarlatinal poison from the blood, and brings out the eruption, thus relieving the cerebral symptoms. 8. Pilocarpin cannot prevent scarlatinal nephritis, but it is the most effectual remedy against dropsy; and in cases treated by it, the kidney-affection appears to run a more favourable course. 9. Nor can it prevent an attack of uræmia, occurring from extensive glomerular and interstitial nephritis; but in less severe cases its diaphoretic and diuretic action can avert uræmic attacks threatening life, and can relieve them more quickly than any other remedy hitherto employed. 10. Owing to its expectorant action, it facilitates recovery from catarrhal laryngitis, from infectious and non-infectious croup, from catarrhal pneumonia; and by the relief of symptoms of laryngo- and tracheo-stenosis which immediately threaten life. Similarly, a quicker loosening of the membrane and fibrinous infiltrations of true and also of scarlatinal diphtheria follows the administration of pilocarpin, though it does not appear to exert any action upon the specific contagium of the disease.

5. *Förster on the Management of Fever in Children.*—The antipyretic treatment of fever in children by cold water, quinine, and salicylic acid, is the subject of some remarks by Dr. Förster (*ib.*) The indication for their employment may be stated to be when danger supervenes from either the height or the duration of the pyrexia. Accurate observations are still wanting on the effect of cold baths, but their therapeutic value is greater than in adults, and their action more intense, since the body-surface is greater in proportion to the body-volume in children. There appears to be considerable difference between rectal and axillary temperatures after cold baths, and a marked fluctuation for some time afterwards. In cases where baths are not applicable, cold packing, sponging, or spraying may be employed; but the effect is not so marked. Quinine and salicylic acid have a more permanent effect than cold water, and should be given to children in doses much larger relatively to their body-weight than is the case in adults. Their use is frequently followed by vomiting; and in those diseases attended by failure of the heart's action, as diphtheria, quinine is to be preferred.

7. *Filatoff on Benzoate of Soda in Diphtheria.*—The result of the observations of Dr. Filatoff, in Moscow (*Arch. für Kinder.*, vol. ii), on the treatment of diphtheria with benzoate of soda, goes to show that this drug is far from being a specific, as asserted by some, and exerts no action on the blood-poison, nor on the removal of the membrane, nor, as an antipyretic, superior to any other agent previously suggested.

8. *Seiler on Ascites in Childhood.*—Dr. Seiler (*Berlin Klin. Woch.*, June 27) divides cases of ascites in children into two primary classes: 1. Those dependent upon some affection of the peritoneum; 2. Those resulting from obstruction in the portal system, exclusive of such varieties as so-called chylous ascites, or fatty degeneration of the peritoneum, or the ascites which forms part of a general dropsy. In the first group are included (*a*) tubercular peritonitis, the exudation in which is always serous, and never hæmorrhagic as is often asserted; (*b*) primary carcinoma of the peritoneum, which often runs a painless chronic course, with a constant sanguineous exudation; (*c*) a primary peritoneal exudation, the result of inflammation similar to pleuritic effusion, is of very doubtful occurrence. In the second group are to be enumerated (*a*) medullary sarcoma of the liver pressing on the portal vein; (*b*) syphilitic gummata, or cicatricial contraction of the liver; (*c*) cirrhosis of the liver. This is the most important. The precise cause of this condition in all cases is obscure, but in the majority, where alcohol is excluded, a diffuse syphilitic hepatitis may be looked upon as producing it. Such cases are curable by mercury and iodide of potassium.

9. *Strange on Chorea.*—The results of the treatment of 100 cases of chorea in the Worcester Infirmary by Dr. Strange (*Brit. Med. Jour.*, July 16 and 30), lead him to regard the disease, along with some of its congeners, as 'a pure inorganic neurosis, the term implying that it has no anatomical or true pathological basis, *post mortem* examinations not having given to it any definite morbid anatomy; and to be looked upon, therefore, as the outcome of a merely functional disturbance, with a substratum of that undefined and, perhaps, for ever undefinable alteration in nutrition of the nervous centres, which we must suppose underlies all the effects of their functions'. The author regards the disease as essentially one of debility or deficiency of nerve-power, and considers that the greater frequency of its occurrence in ill-nourished subjects, as well as the excessive motility or want of power to restrain, as well as duly to coördinate muscular movement, are proofs of this proposition. Fright operated as the exciting cause in at least two-thirds of the cases. Hemichorea was of rare occurrence; and in a few cases the affection was limited to several muscles or even the diaphragm only, producing in this case every two or three minutes, except during sleep, a sharp jerky hiccough. The writer considers that everything points to defective nutrition of the brain, and, perhaps, of the spinal cord also. Agreeing with Dr. Sturges in the value of the moral treatment of this malady, Dr. Strange considers that it alone is not sufficient, and that tonics, friction of the limbs, and gymnastics, are equally necessary. One of the most successful tonics the author has found to be the daily administration of 3 to 6 ounces of port wine.

12. *Kennedy on Whooping-Cough.*—Dr. Kennedy, in the course of some remarks on purtussis at the Dublin Obstetrical Society (*Dublin Jour. of Med. Science*, Sept.), expressed an opinion that the disease is partly neurotic and partly of a specific inflammatory character; and he considers that during the existence of the disease some poison circulates in the system. In justification of this view, he refers to the paroxysmal and convulsive cough which often occurs in the gouty diathesis, and in that form of influenza know as 'la grippe', as well as in varicose irritation, or cases of worms. The author is further of opinion that there is some temporary enlargement of the lymphatic glands, especially those of the thorax. Referring to the frequent difficulty in diagnosis before the whoop appears, he refers to the following points as helping to come to a conclusion; the persistence of the cough and its resistance to treatment; the liability of the child to be suddenly awakened by the cough from a quiet sleep; the congested and slightly swollen fauces. Dr. Kennedy is quite of opinion that the disease is amenable to treatment, and should not be regarded as necessarily to run its course. He advises a strictly fluid diet, chiefly milk; and, looking to the fact that the cough is worse at night, he directs the medicine to be given in the afternoon and on into the night, a dose after each paroxysm. The inhalation of one or two whiffs of chloroform he has found of marked service in lessening the violence of the fits. A mixture containing bicarbonate of potash and tincture of

belladonna, an old remedy, is often efficacious in diminishing the intensity and frequency of the attacks; for which also 2 to 4 grains of extract of conium may be given. Chloral, however, gives the best and most constant results, and may be given in doses of half a grain to an infant a month old. When the bronchial secretion is profuse, expectorants, of which ipecacuanha is best, are indicated; and rubefacients, especially if rubbed on the stomach, the often useful.

13. *Filatoff on the Etiology and Diagnosis of Acute Peritonitis of Children.*—The diagnosis of acute peritonitis offers no difficulty, so characteristic are the symptoms; but the explanation of a cause is not always so easy, and in many cases is quite unknown, or included in the vague term rheumatic. Dr. Filatoff, after pointing this out, proceeds to recount a case in which all the marked symptoms of the disease were present, and which he considered was due primarily to a straining of the abdominal muscles by excessive gymnastic exercise, followed by improper diet. He refers to another case, in which the symptoms of acute peritonitis were closely simulated by an affection of the recti abdominis, also brought on by excessive gymnastics.

14. *Parker on the Curvatures of the Long Bones in Rickets.*—In the course of some remarks on the curvatures in the long bones in rickets, Mr. Parker takes exception to the usually received explanation of their cause. He says that after diligent searching he has never seen 'soft and yielding' long bones in rickets, either *post mortem* or in the course of osteotomies, and he quotes Virchow in denying rickets to be a malacia. Mr. Parker states that the majority of curves occur between the second and third years; and he is inclined to regard them as exaggerations of the natural curves, and further considers their great similarity to contra-indicate softening as a cause, which should rather lead to indiscriminate flexures. The exceptional recorded cases of undoubted rickets, where the curvatures commenced in advanced childhood, and even during adolescence, when softening of bones does not seem at all possible, as well as the spontaneous disappearance of the curves without keeping children off their feet, and without artificial support, as well as the very slow recovery often seen with mechanical restraint and perfect rest, are all adduced as arguments by the author against the current explanation. Without offering any reason, Mr. Parker believes that the long bones may assume various and considerable curves without undergoing infraction, or without previously becoming soft. The relaxed and flabby condition of the muscular system generally to be found in such cases, exclude muscular action as a cause for the curvatures of the long bones. [It should not be difficult to determine whether rachitic bones be soft or not. There is an acknowledged deficiency in hard mineral constituents, and an excess in the soft spongy ossifying material, even to the extent that 'thick bones may be cut with a knife or pair of scissors' (Aitken). The deformities of the spine and chest, as well as the very frequent flexures of the long bones, in directions other than those of the normal curves, and the liability to 'green stick fracture' in rickets, can scarcely be explained on any 'hypertrophic view' unless the hypertrophied tissue be unduly soft.—*Rep.*] W. H. ALLCHIN, M.B.

15. *Treves on Strangulated Congenital Hernia.*—In the *Lancet*, Feb. 1881, p. 323, Mr. Frederick Treves gives the notes of a case of umbilical hernia in a child a few hours old. The cord at its point of connexion with the abdomen presented an oval and uniform swelling, about the size of a bantam's egg. The swelling was in the cord itself, and that structure, at its union with the abdominal parietes, was but little larger than normal. Nothing had passed from the bowels since birth. No operative interference was allowed until the next day, when the tumour was opened and the bowels found firmly strangulated, the seat of constriction being at the neck of the sac. After some difficulty, the bowel was freed, and twelve hours subsequently a copious motion passed, the child making a perfect recovery. A *résumé* of what is known and has been done in similar cases closes this instructive paper.

16. *Green on Cerebral Pyrexia in Children who have been Exposed in Paddling at the Seaside.*—In the *Practitioner*, Feb. 1881, p. 100, Mr. W. E. Green records the results of his observations upon children who suffered from sun-fever, after exposure to the hot sun of the past summer, whilst paddling in the sea. The affection is nearly allied to sunstroke. Cases in Mr. Green's practice have been diagnosed as acute tuberculosis and typhus and typhoid fevers, but presented the following distinctive characters. 1. The temperature rises at once to its highest point, and there remains, or else falls to 102.4, when it continues steady until its final fall; and, unlike typhoid, if there be any variation, it falls a little towards night, and returns to its original standard in the morning. 2. The pulse may be rather rapid for the first day or two, but soon falls to a full bounding pulse of from seventy-two to eighty-four; the pulse in typhoid generally rising *pari passu* with the temperature. 3. The tongue is rarely dry, the diarrhœa is only occasional, there is no tympanites, and as a rule very little thirst, the patient liking milk, but showing great distaste to other food.

R. NEALE, M.D.

NEUROLOGY.

RECENT PAPERS.

1. ARCHER, R. S.—Case of Spinal Irritation Complicated by Cataleptic Manifestations. (*Dub. Journ. of Med. Science*, April.)

2. MERCER, A. S.—Myxœdema. (*New York Med. Rec.*, April 16.)

3. SEGUIN.—Postparalytic Chorea. (*Trans. American Neurol. Assoc.*, vol. ii.)

4. SEGUIN, E. C.—Localised Cerebral Lesions. (*Ibid.*)

5. GARNIER.—Vesication in Epistaxis. (*Jour. de Méd. et de Chir.*, April 1881.)

6. SEGUIN.—Early Diagnosis of Some Organic Diseases of the Nervous System. (*New York Med. Record*, 1881.)

7. WESTPHAL.—Affections of the Joints in Locomotor Ataxy. (*Berlin. Klin. Woch.*, July 18, 1881.)

1. *Archer on a Case of Spinal Irritation, complicated by Cataleptic Manifestations.*—Dr. Archer (*Dublin Journal of Medical Science*, April 1881) gives the following as the most important symptoms of spinal irritation: pain and tenderness along the spine, especially in the cervical, interscapular, and lumbar regions; hyperæsthesia of the skin over these parts; neuralgic pains in various parts; paræsthesia and anæsthesia; readily induced fatigue, and inability to walk for any distance without pain; ab-

sence of true paralysis; spasmodic phenomena; vaso-motor disturbances, such as pallor and cyanosis of the extremities; gastric derangement; palpitation; disorders of respiration and spasmodic cough; spasm of the bladder and the passage of an increased quantity of pale clear urine; sleeplessness, giddiness, noises in the head, disturbances of vision, muscle, etc. The proximate exciting causes are stated by Erb to be alcoholic excesses, opium-eating, traumatism, cold, and other influences exciting or depressing the nervous system. Opinions vary as to the condition of the spinal cord. Some believe that there is hyperæmia, others anæmia, and others still (including Erb) that the disorder is functional. The case related by Dr. Archer presented several of the symptoms above-mentioned; but it was complicated with cataleptic symptoms, and some degree of mental disturbance. The disease was ascribed to a severe fall seventeen days previously. Dr. Archer, whilst allowing that there was an hysterical element in the case, nevertheless believes that this was not the only influence at work. According to Dr. Archer, the medulla oblongata is also liable to 'molecular temporary disturbance'. He narrates the case of a lady who was seized with transitory inco-ordinate articulation after a sudden mental shock.

2. *Mercer on Myxœdema.*— In this paper (*New York Medical Record*, April 16, 1881), which was read before the Syracuse Medical Association, Dr. A. C. Mercer gives an excellent *résumé* of this affection. When considering the causes of myxœdema, he remarks that the mucoid change, occasionally found in the cartilages of old people, suggests that this disease may perhaps be due to exhausting influences; and, in support of this view, he quotes a case of Dr. Semon's. Dr. Mercer inclines to the opinion that the disease has a trophic neurotic origin.

3. *Seguin on Postparalytic Chorea.*—Dr. Seguin (*Trans. of the Amer. Neurol. Assoc.*, vol. ii) describes two cases of the interesting affection which Charcot has termed 'posthemiplegic' chorea. The first case was that of a male, aged 18, who was suddenly attacked by weakness of the left arm, followed in the course of a few days by numbness. At the onset cerebral symptoms were absent, and the leg was quite unaffected. Later, convulsive movements of the arm, leg, and face on the left side, made their appearance. The sight became impaired; temporary diplopia, with double vision, temporal headache, and nausea succeeded; but there were no rectal or vesical symptoms, and no dysphagia. On careful examination, he was found to be suffering from left hemiplegia, accompanied by peculiar spasmodic movements, which are described as choreiform. The parts affected were the left arm, shoulder, and leg, the muscles of the trunk and neck being uninvolved. The spasms, which presented a marked ataxiform element were absent during sleep. Sensibility was slightly impaired in the fingers and hands. There was no paralysis nor twitching of the face, no impairment of the visual fields; the tongue, however, pointed a little to the left, the left pupil was larger than the right, and the optic discs were congested and blurred. There was no evident paralysis of the muscles of the eyeballs. At a later period, marked hebetude came on; paralysis of the right third nerve, with left facial palsy and anæsthesia in the course of the left supra-orbital, were noticed. Before death, there were frequent syncopal attacks without spasm or unconsciousness. No necropsy was made. Dr. Seguin believes that the lesion was hæmorrhage, with subsequent inflammation around the clot, though he allows that a tumour may have existed. The lesion was probably situated above the motor tract of the right crus cerebri, which must have been acted upon by pressure. The second case was that of a male, aged 26, who was suddenly attacked with right hemiplegia. The day following, there was aphasia, and he 'could only see with the inner half of the right eye'. The paralysis improved, but irregular movements of the right arm gradually made their appearance, and there was numbness, especially on the right half of the face. Subsequently, the patient had two epileptiform attacks attended by loss of consciousness. On examination he was found to have a kind of 'aphasic stammering' and slight weakness of the right hand. The movements were of two kinds. When the hand was at rest, it was affected with rhythmical tremors, like those of paralysis agitans. When a purposive action was attempted, the movement was partly ataxiform and partly, though to a less extent, of a choreic type. The right leg was unaffected; there was no facial paralysis, but the tongue deviated slightly to the right. There was right hemianæsthesia to a certain extent. The right temporal and left nasal halves of the visual fields were obscured. There was no distinct history of syphilis; still the treatment was directed, though unsuccessfully, against that disease. The diagnosis was 'slight cerebral hæmorrhage just outside the left optic thalamus.' Dr. Seguin calls attention to the co-existence in these cases of hemiplegia, hemianæsthesia, and choreiform movements. He believes that the hemiopia in the second case is an argument against Charcot's assertion, that lesion of the hemisphere is incapable of producing this defect of vision. Dr. Seguin remarks that 'there is no probability that there was in this case a second lesion affecting one of the optic tracts.' [If we are not mistaken, Dr. Seguin has misunderstood M. Charcot's statement. The latter maintains that hemiopia is due either directly to lesion of the optic tract or, indirectly, to pressure exerted on the tract by a neighbouring lesion. There is no reason why hæmorrhage, for example, in one hemisphere should not exert pressure on the optic tract. In the absence of a necropsy, this case cannot be brought forward as disproving Charcot's proposition, although Dr. Hughlings Jackson, and others, have adduced evidence of a very conclusive nature against the statement that hemiopia is invariably caused, directly or indirectly, by involvement of the optic tract.—*Rep.*]

4. *Seguin on Localised Cerebral Lesions.*— The cases described by Dr. Seguin (*Trans. of the Amer. Neurol. Assoc.*, vol. ii, 1877) are divided into three classes: (1) cases in which localised lesions gave rise to aphasia; (2) those causing paralysis; (3) those producing spasm. In the first category four cases are included, all tending to support Broca's proposition as to the seat of the speech-centre. The first case was one of right hemiplegia with aphasia. After death, extensive softening was found affecting the cortex of the left hemisphere, especially in the region of the parietal lobe. There was superficial degeneration of the cortex of the third frontal convolution. Although the psycho-motor centres were destroyed, the patient regained considerable voluntary power over her paralysed extremities. Dr. Seguin believes that other parts of the hemisphere had acquired controlling power over the limbs. The second case, also one of right hemiplegia and aphasia, is interesting from the fact that there was embolism of the left middle cerebral artery, with softening limited to the white matter corresponding to the

third frontal convolution. The ascending frontal and parietal convolutions were apparently intact. Unfortunately, no microscopical examination was made. Dr. Seguin remarks that these parts may have been spared from gross softening, by an usually free anastomosis between the terminal branches of the obstructed Sylvian artery. In the third case, there was chronic meningitis involving the speech-centre and the lower extremities of the ascending convolutions, but, in addition, there was extensive central softening. The symptoms were aphasia and right hemiplegia, with epilepsy and distinct insanity. This and the fourth case, one of tubercular meningitis and constitutional syphilis, although tending to support Broca's hypothesis, are so complicated that their value is much impaired. In the second part, Dr. Seguin narrates a case of paralysis dependent on a limited cerebral lesion. The patient, a woman aged 54, became suddenly paralysed on the right side. The face was unaffected, the speech preserved, and there was no unconsciousness. At the necropsy, there was an appearance like ulceration of the ascending frontal convolution and softening of the subjacent white matter. In addition, there was found to be exudation between the dura mater and bones, from the third to the fifth cervical vertebræ. In the third part, two cases of localised convulsions, dependent on limited cerebral lesions, are described. In the first case there was a history of a fall, followed by left hemiplegia. Three years afterwards, ordinary epileptic convulsions came on. Subsequently, the attacks were localised to the left side of the face and neck and left arm. The spasms began in the facial muscles, and in those of the thumb and index finger. There was no loss of consciousness. The left arm was quite paralysed, and the left side of the face and left leg paretic. There was also left tactile anæsthesia. Before death, the hemiplegia became more pronounced, the extremities rigid, and the convulsions attended by unconsciousness. There was no sign of optic neuritis at any time. The necropsy showed inflammatory thickening of the right frontal bone, a large tumour (alveolar sarcoma) in the right centrum ovale, with consequent pressure on the white matter and central ganglia. There was also pachymeningitis affecting the convolutions on the right of the longitudinal fissure, with much thickening and roughness of the corresponding portion of the calvarium. The second case was that of a boy, who had suffered for many years from an empyema. He was suddenly attacked by clonic spasm affecting the middle finger of the left hand, extending to the forearm and left side of the face. The attack, which lasted about a minute, was not attended by loss of consciousness, anæsthesia, or subsequent paralysis. The patient, however, had much headache, vomiting, and pyrexia. Before death, albuminuria, irregularity of pulse, and general convulsions were noticed. At the necropsy, there was found to be basal meningitis without tubercles. On the left side an abscess involved the lower part of the second frontal convolution, and the third frontal just in front of the speech-centre. No symptoms referable to this lesion were observed during life; and hence Dr. Seguin concludes that in some human brains these parts contain no motor cell-groups. On the right side a small abscess, of the size of a pea, was found in the white substance beneath the cortex of the anterior part of the second parietal convolution, just above the upper extremity of the fissure of Sylvius. This lesion, which probably gave rise to the spasm of the left side of the face and left hand and forearm, was situated just behind Ferrier's centres for movements of the hand and wrist.

W. B. Hadden, M.D.

5. *Garnier on Vesication in Epistaxis.*—Dr. Garnier, at a meeting of the French Association of Science (*Journ. de Méd. et de Chir.*, April 1881), reported a case of obstinate epistaxis in which ergotine, etc., had been tried in vain, but which promptly yielded to the application of a blister over the liver. The patient was an alcoholist, and his liver seemed slightly cirrhotic. The blister, it is alleged, acted on the nervous reflex principle.

6. *Seguin on Localisation of Diseases of the Spinal Cord.*—Dr. Seguin of New York (*Annals of the Brooklyn Anat. and Surg. Soc.*, vol. ii, No. 12) divides the spinal cord roughly into two unequal regions, viz., the æsthesodic system, which comprises the posterior columns and cornua, and serves for the transmission of centripetal or sensory impulses; and the kinesodic system, including the antero-lateral columns and anterior cornua, serving for the transmission of centrifugal or motor impulses. Diseases of the cord may be divided into systematic and focal affections, the former involving either the æsthesodic or the kinesodic system, and the latter implicating the lumbar enlargement, the lower and upper dorsal region, the cervical enlargement, upper cervical region, and cauda equina. Of these diseases, Dr. Seguin, in the present communication, only considers those which are systematic. The only disease of the æsthesodic system is posterior sclerosis, tabes or locomotor ataxy, affecting the posterior root-zones, or columns of Burdach. He gives a good description of the lightning pains peculiar to this disease, and owing to irritation of the sensory nerve-fibres by the advancing sclerosis; while the numbness and anæsthesia of the later stage are caused by actual destruction, or great compression, of the sensory fibres. Retardation of sensation, so that 10 to 120 seconds elapse between the impression and the realisation of it, is also caused by destruction of the myeline, and pressure on the axis-cylinders, by the sclerosed interfibrillary tissue. The other symptoms of tabes are to all appearance motor, but depend really on interference of the disease with the sensory paths, being diminished reflexes, pupillary, cutaneous, tendinous, and visceral; the latter affecting chiefly the bladder, rectum, and sexual organs. For the explanation of the symptom of ataxy he gives three theories, viz., 1. That interference with sensory intraspinal tracts diminishes muscular tonus, and thus leads to inharmonious movements; 2. That anæsthesia of the muscles leads to loss of muscular sense; and 3. That Lockhart Clarke's arciform or longitudinal commissural fibres are sclerosed, and, as they are believed to unite, for the purpose of harmonious action, the spinal centres for the various groups of muscles, therefore ill-combined, asynergic muscular movements must be produced. Amongst the diseases of the kinesodic system Dr. Seguin mentions, first, the degeneration of ganglion-cells in the anterior horns, corresponding, clinically, to muscular atrophy; the chief peculiarities of it being its gradual invasion, affection of symmetrical and homologous parts, and fibrillary twitches of the affected muscles. This latter symptom, however, is not pathognomonic, as was formerly believed; for the same twitches may be seen in neurasthenia, lead-palsy, and some other forms of paralysis. The second disease is anterior myelitis, which is characterised by rapidly supervening paralysis, muscular atrophy, altered electrical reac-

tions of nerves and muscles (degeneration-reaction, Erb; wasting-test, Althaus), non-affection of the bladder and rectum, or the respiratory muscles, abolition of tendon-reflexes, slight development of sensory symptoms, such as numbness, paræsthesia, or neural pains, and fever. In the third place, lateral sclerosis, spasmodic tabes (Charcot), spastic spinal paralysis (Erb), tetanoid paraplegia (Seguin), is considered. The author does not commit himself to any decided view regarding the pathological anatomy of this disease. The principal symptoms are slowly increasing paresis in the legs, with tendency to contracture and increase in all reflexes, precipitate micturition and defæcation, and absence of sensory symptoms. After a few remarks on infantile tetanoid paralysis, amyotrophic lateral sclerosis is recognised as a combination of diseases of the anterior cornua and lateral column; and, lastly, descending degeneration of spinal and cerebral origin is treated. The spinal form occurs when the physiological continuity of the cord is interrupted, through injury, pressure from a tumour or a displaced vertebra, or a focus of transverse myelitis, the changes differing completely above and below the seat of the lesion. Above, it is limited to Goll's columns, while below it affects the crossed and direct pyramidal columns. The cerebral form occurs in focal disease above the decussation of the anterior pyramids, the nature of the lesions being immaterial, and the symptoms consisting of increased reflexes and contracture in the paralysed parts. Contrary to the generally received opinion, Dr. Seguin repeats his hypothesis of the contracture being due to the withdrawal of cerebral influence by the primary lesion, and the consequent preponderance of automatic spinal action. He does not, however, explain why the symptoms of contracture and increased tendon-reflexes only appear about six weeks after the lesion, *i. e.*, after sclerosing myelitis has begun in the crossed pyramidal tracts. If Dr. Seguin's theory were correct, there ought to be increased tendon-reflex and ankle-clonus immediately after the paralytic seizure, which is well known not to be the case; and his theory has for this reason to be rejected.

7. *Westphal on Affections of the Joints in Locomotor Ataxy* (*Tabes Spinalis*).—Professor Westphal (*Berl. Klin. Woch.*, July 18, 1881) says that the affection of the joints, to which Charcot was the first to draw attention, sometimes comes on quite suddenly, so that the patient, on awaking in the morning, notices a swelling; and, on examination, it is found that there is effusion in the neighbourhood of the joint, and into the joint itself. There is neither redness of the skin nor pain on active or passive movement, nor increase of temperature, and the general health is not in any way affected. Soon afterwards, the swelling is noticed to spread over greater areas of the suffering limbs, and does not resemble œdema, but is firm to the touch, so that pressure does not cause any pitting. Occasionally, the superficial veins of the extremities are found to be distended. The swelling of the limbs and the serous effusion into the joints go on increasing, and the latter often attains an enormous size. Sometimes, on moving the joint, a kind of crepitus or crackling is perceived; it appears deformed; and hard, round, and partially movable foreign bodies may be felt in the articulation. This swelling tends to remain stationary after having attained a certain extent, for weeks and months, and then slowly diminishes again; the deformity, however, and the abnormal mobility (dislocation and subdislocation) become permanent. The epiphyses appear to have been destroyed, or, in their place, there are thick and irregular masses of bone, or smaller and rounded osseous patches, at the sides of the joint, which may be movable, and the movements of which are accompanied by a crunching noise. French authors distinguish a benign and a malignant form, the latter being marked by rapidly developed deformity, while in the former there is only swelling without a perceptible change in the joint itself after the liquid effusion has been absorbed; but Westphal thinks that these two forms cannot be strictly separated, since they are apt to merge into one another, for even benign swellings tend to return from time to time, and lead sooner or later to structural changes in the articulation. It is almost invariably the larger joints which are the seat of the affection, more especially those of the foot, the knee, shoulder, and elbow; while those of the hand and fingers are very rarely affected. Arthropathy is not confined to any one of the three stages of tabes, and has no particular predilection for the later periods of the disease. Indeed, Westphal describes a case which occurred in the beginning of the malady, and long before the symptoms of ataxy had become manifest. In that case, there had been temporary double vision seven years previously to the appearance of the arthropathy, and four years afterwards the first symptoms of joint-disease, with impotency and incontinence of the urine, became developed; and only three years later the other characteristic symptoms of tabes set in. Occasionally there may be redness of the skin, as Westphal saw in the case of a Russian captain, in whom most of the joints of the upper extremities, and even the smaller ones, were affected. He does not attach much importance to the statement of Buzzard that 'gastric crises' are frequently combined with arthropathies, for gastric crises are very frequent, while arthropathies are rare; and, in Westphal's cases of arthropathy, gastric crises happened to be absent. There is, in certain cases of tabes, a tendency to spontaneous fractures of the bones, which would appear to be connected with the arthropathy. In one of Westphal's cases, the right femur was fractured in bed, the patient having raised the leg quickly, in atactic fashion. In another case, there was at first such a firm and extensive swelling of the right hip and thigh, that nothing definite could be ascertained about the nature of the changes which had taken place; but when the swelling diminished there appeared to be dislocation of the hip-joint, absence of the head of the femur, and a hard irregular kind of tumour which proceeded from the upper third of the femur, and gave the impression of an osteoma; after a time, however, it began to shrink, and left like irregular callus. Westphal explains this by primary affection of the hip-joint, which predisposed the upper portion of the femur to spontaneous fracture; and this latter was facilitated partly by the atactic movements of the legs, and partly by extremely severe tonic and clonic spasms of the legs, from which the patient suffered. The nature of the changes is in general as follows: thickening of the capsule, more or less extensive destruction of the synovial membrane or proliferation of the same; destruction of the cartilages, with sclerosis of bone and formation of stalactites; more or less clear, yellowish liquid in the joint, rarely pus; and destruction of the head of the bone, sometimes extending even further, and leading to dislocation, subdislocation, and, occasionally, to the formation of a new joint. French

authors are agreed that there is a causal connection between arthropathy and the sclerosis of the posterior columns; but Westphal is not sure of this, more especially as Charcot's explanation of it by atrophy of the ganglion-cells in the anterior horns can no longer be received, since, in some such cases, the anterior horns have been found perfectly healthy. Another question is, whether this is a form of joint-disease peculiar to tabes, and which does not occur otherwise. Charcot is of this opinion, and has endeavoured to separate it absolutely from arthritis deformans; but Westphal thinks that the question is still an open one. Supposing, however, that the affection were peculiar to tabes, it has not yet been shown in what way and under what special conditions the central disease conduces to a joint-affection. Experimental physiology does not help us in this matter. It would be easily intelligible if injury could be shown to be the exciting cause of it; and this is Volkmann's opinion, who accuses the atactic movements of the patients, as causing injury to the ligaments and capsules by distension, and thus leading to arthritis. But this explanation is refuted by the circumstance that arthropathy often occurs previously to the development of the symptoms of ataxy; and the whole subject appears to be still enveloped in great obscurity.

JULIUS ALTHAUS, M.D.

DISEASES OF THE THROAT.

RECENT PAPERS.

1. LUX.—Perichondritis and Chondritis of the Larynx. (*Rec. des Mém. de Méd. de Chir. et de Phar. Militarie*, July and August 1881; *Gaz. Méd. de Paris*, Sept 3, 1881.)

2. GOUGUENHEIM.—Tracheo-Laryngeal Adenopathy. (*Gaz. Hebd. de Méd. et Chir.*, Sept. 9, 1881.)

3. CHAUFFARD.—Phlegmonous Laryngitis: Œdema of the Glottis. (*Ann. des Mal. de l'Oreille, du Larynx, etc.*, July 1881.)

4. SCHWARTZE.—Œdema of the Glottis following Suppuration of the Cervical Glands. (*Société Clinique*, Feb. 10, 1881; *Ann. des Mal. du Larynx*, July 1881.)

5. KRISHABER.—The Removal of the Tonsils by the Actual Cautery. (*Ann. des Mal. de l'Oreille, du Larynx, etc.*, July 1881.)

6. WHITE.—A New Solvent for Diphtheria. (*Lancet*, Oct. 22, 1881.)

7. HARTMANN.—Epistaxis. (*Zeits. für Ohren.*, Theil x.)

8. MARTIN.—True Ozæna. (*Ann. des Mal. du Larynx, etc.*, July 1881.)

9. SCHÆFFER.—Ozæna. (*Monats. für Ohren.*, No. 4, 1881.)

10. SMITH.—Indications for the Treatment of Naso-Pharyngeal Catarrh. (*New York Med. Rec.*, Aug. 1881.)

11. BRESGEN.—Chronic Catarrh of the Nasal Fossæ and Pharynx. (*Ann. des Mal. du Larynx, etc.*, July 1881.)

12. TOAL.—Lesions of the Larynx in Tuberculosis. *Archiv. Gén. de Méd.*, May and June 1881.)

13. TAUBER.—Removal of a Bullet from the Pyriform Sinus. (*Ibid.*)

14. MICHAEL.—Chronic Laryngeal Affections in Children the Result of Acute Infectious Disease. (*Deut. Archiv für Klin. Med.*, Band xxvii, Heft 6.)

15. LANGREUTER.—Syphilitic Stenosis of the Larynx. *Deut. Archiv. für Klin. Med.*, Band xxvii, p. 322.)

16. DALY.—Nasal Polypi. (*Arch. of Laryng.*, April 1, 1881.)

17. GERSTER.—Wound of the Hard Palate by Fracture of the Lower Jaw: Uranoplasty. (*New York Med. Rec.*)

1. *Lux on Perichondritis and Chondritis of the Larynx.*—Dr. Lux (*Rec. des Mém. de Méd. de Chir. et de Phar. Militaires*, July and August 1881; *Gaz. Méd. de Paris*, Sept. 3, 1881) records a case of the above in a man with a doubtful syphilitic history. For some months, he had suffered from angina. On entering the hospital he was pale and anæmic, the tonsils were red and swollen, and there was some superficial ulceration on the left anterior pillar of the fauces. Dull pain was elicited on pressing the larynx. There was no fever. Eight days afterwards, deep ulceration was perceived on the left anterior pillar of the fauces, with greyish base and red edges. There was no pain on moving the larynx; but, on grasping this part with the fingers, Dr. Lux thought he could detect some slight crepitation. The ulceration spread downwards by the side of the larynx. Respiration became difficult, but unattended with cough, and death occurred suddenly in a fit of suffocation. At the necropsy, the cricoid cartilage was found denuded. The middle and posterior parts of it had disappeared, leaving the cartilage of crescentic form. The left portion, necrosed and detached, was bathed in pus. The crico-arytenoid muscles were thickened, and of a deep red colour.

2. *Gouguenheim on Tracheo-Laryngeal Adenopathy.*—The author sums up his paper on the above subject (*Gaz. Hebd. de Méd. et Chir.*, Sept. 9, 1881) with the following conclusions. The space between the larynx, trachea, and œsophagus, is the seat of very small lymphatic glands in the neighbourhood of the recurrent nerves. These glands are not always present, or they are so small that they can only with difficulty be discovered, and for this reason are not described in anatomical treatises. Hypertrophy of these glands constitute what he calls tracheo-laryngeal adenopathy. The compression of the recurrent nerves by these hypertrophied glands produces signs hitherto wrongly ascribed to an enlargement of the tracheo-bronchial glands. The symptoms are of two kinds: paresis, and contraction of the vocal cords. Paresis is rather common in the course of tuberculosis, of secondary syphilis, and perhaps of cancer as well. Contraction is extremely rare. Paresis of the vocal cords is capable of improvement by the induction-current. Contraction is very serious; it may provoke dangerous respiratory troubles and necessitate tracheotomy.

5. *Krishaber on the Removal of the Tonsils by the Actual Cautery.*—Dr. Krishaber (*Ann. des Maladies de L'Oreille, du Larynx, etc.*, July 1881), has for two years used the actual cautery in the treatment of hypertrophied tonsils. The results, he says, are as satisfactory as those that follow the excision of the tonsils with the tonsillotome or bistoury, while the risk of serious hæmorrhage that may occur when these latter methods are used is avoided. The process is as follows. The patient is placed as for laryngoscopic examination, with the mouth open, the tongue firmly held down by a spatula, and the back of the throat well illumined. Dr. Krishaber generally uses Paquelin's thermo-cautery, with tapering point, and brought to a red heat. When he wants to alter the nutrition of the gland only, he prefers using the galvano-battery of Trouvé. The point of the instrument is plunged as deeply as possible into the tonsil, then five or six fresh punctures are made above and below the first, in a vertical line, and 6 or 8 millimètres from the free edge. Between the operations, which generally have to be repeated five or six times, an interval of two or three days is left to let the scab come off, etc. The operation is not painful;

a burning sensation is rarely felt. No bad result has yet followed this treatment, and the improvement obtained by it has been lasting.

6. *White on a Solvent for Diphtheritic Membrane.*—Mr. Hale White (*Lancet*, Oct. 22, 1881) suggests the use of acid glycerine of pepsin as a solvent of the diphtheritic membrane. The case in which he tried it was of unusual severity. The throat was sprayed with half an ounce of the solution with Siegel's spray every two hours, and the treatment continued for three days, when, as no membrane had been coughed up for twelve hours, it was left off. The pieces coughed up had a very soft and gelatinous character, in comparison to the thick and tough pieces that are usually expelled. The child did well; but some time afterwards, owing to sudden changes in the weather, it got broncho-pneumonia, and died. At the *post mortem* examination, there was nothing to show that the pepsin had any ill effects on the lungs, bronchial tubes, or lungs. Mr. White thinks that the chief use of the pepsin was in preventing formation of membranes in the small tubes and bronchi, by mixing with the secretion. He adds that, if a piece of membrane be put in a test-tube with a small quantity of the fluid, the power of the pepsin to dissolve the membrane will be readily attested.

7. *Hartmann on Epistaxis.*—The author (*Zeits. für Ohren.*, Theil x; *Ann. des Maladies du Larynx, etc.*, July 1881) warns against the dangers of plugging the posterior nares, especially if perchloride of iron be made use of at the same time. The presence of the tampon is not only, he says, very disagreeable to the patient, but is apt to cause great irritation of the mucous membrane. If perchloride of iron be used, fresh hæmorrhage frequently occurs when the plug is removed, from the tearing of the mucous membrane to which it has adhered. Dr. Hartmann has seen three cases in which plugging of the posterior nares has been followed by inflammation of the middle ear.

9. *Schæffer on Ozæna.*—Ozæna, according to Dr. Max Schæffer (*Monats. für Ohren.*, No. 4, 1881; *Ann. des Maladies du Larynx, etc.*, July 1881) is nearly always the result of scrofula or of syphilis. It may be due, however, though rarely, to a primary affection of the bones or cartilage. He distinguishes two stages of the affection, a hypertrophic and an atrophic. In the former the secretion is abundant, thick, and creamy, and forms thick crusts, especially in the naso-pharynx. The crusts, when detached, give rise to hæmorrhages, and leave behind them erosions, which are apt to run on to superficial or deep ulceration. The mucous membrane is livid, thickened, and pits on pressure. In the atrophic stage the secretion is less abundant, more fluid and viscid, and forms fine crusts, its opacity being due to the admixture of epithelium. The mucous membrane is pale, thin, and very adherent to the bones, and undergoes fibroid degeneration, whilst the glands are destroyed. The spongy bones are atrophied, and the meatus on each side is considerably enlarged. When due to hereditary syphilis, the ozæna is frequently developed during the first weeks of life, the hypertrophic stage lasting in these cases eight to ten years. The duration is the same when scrofula is the cause. In acquired syphilis the stage is shorter, lasting from six months to a year. Here the affection does not begin in the mucous membrane, but in the periosteum and cartilage of the bone. The author recommends injections of chlorate of potash to be used twice a day, and in the intervals he introduces, in the atrophic stages, plugs of cotton-wool. He condemns the use of carbolic acid, and says that in cases cured by its use smell is permanently lost. Constitutionally, he makes use of the usual remedies.

10. *Smith on the Indications for the Treatment of Naso-Pharyngeal Catarrh.*—Dr. Smith (*New York Med. Record*, August 1881) tabulates the indications for treatment in naso-pharyngeal catarrh as follows. 1. Keep the parts clean. 2. Remove all sources of irritation resulting from occupation, residence, climate, etc. 3. Enforce attention to hygiene and to the general health. 4. If there be obstruction to nasal breathing, remove the obstruction. 5. If there be ulceration use strictly local applications with a view to healing. 6. If there be hypertrophied glandular stricture yielding excessive secretion, remove the hypertrophied portion. 7. If, after the above indications have been fulfilled, there be still hyperæmia, use mild astringents and sedatives and such constitutional treatment as is thought to be indicated. 8. Cease treatment the moment there is no longer a definite indication for it. Dr. Smith considers the fourth indication, *i.e.*, removal of obstruction to nasal breathing, as of great importance, and for a reason which, he believes, has not yet been brought forward. Nasal stenosis causes hyperæmia of the membrane behind it, owing to the rarefaction of the air with each respiration. All the tissues subjected to the action of this partial vacuum must suffer a proportionate congestion, as certainly as the skin under a cupping-glass. From congestion to excessive secretion is but a single step; hence the persistence of the discharge in many cases, and the prompt abatement of it that follows relief of the stenosis.

11. *Bresgen on Chronic Catarrh of the Nasal Fossæ and Pharynx.*—Dr. Bresgen (*Annales des Maladies du Larynx, etc.*, July 1881) enumerates the causes of the above affection as frequent colds, enlarged tonsils, elongated uvula, abuse of tobacco, snuff, and the vitiated atmosphere of warm rooms. Syphilis, he says, is not a cause, as it only affects the nose when it is previously the seat of catarrh. Among the symptoms, he insists on the importance of bleeding and redness of the nose as certain signs of commencing chronic rhinitis. His treatment consists in the insufflation of powdered nitrate of silver and starch (from 0.5 to 10 per cent.), and in obstinate cases he applies the galvano-cautery. He seldom resorts to injections, except in cases attended with much fœtor, and condemns the use of the plug recommended by Gottstein. To facilitate the inspection of the posterior nares he inserts the index finger of the left hand—preferring it to the hook of Voltolini—to draw the palate forward. To overcome the hyperæsthesia of the palate, fauces, etc., frequently present, Dr. Bresgen paints the parts with iodide of glycerine (iodine 0.5—0.1, iodide of potassium 2.5—5, glycerine 25) and affirms that in three applications a sufficient degree of insensibility is obtained. During these applications the patient is forbidden the use of tobacco, alcoholic drinks, and strongly spiced food.

13. *Tauber on the Removal of a Bullet from the Pyriform Sinus.*—The patient (*Archives of Laryngol.*, Jan. 1, 1881), who complained of painful swallowing, hoarseness, and shortness of breath, had received a shot twelve years before in the left side of the neck. The laryngoscope showed that the left pyriform sinus was entirely covered. The sound was introduced, and met with a firm hard body. With the laryngeal forceps, a ball was removed. All the symptoms disappeared in a few days.

14. *Michael on Chronic Laryngeal Affections in Children, the Result of Acute Infectious Diseases.*—The author describes (*Deutsches Archiv für Klin. Med.*, Band xxvii, Heft 6) a series of cases of obstinate chronic laryngeal and tracheal catarrh in children, occurring as a sequel to various infectious diseases. Four cases were those of children in whom a slight hoarseness and shortness of breath on movement remained after the primary affection (whooping-cough, small-pox, diphtheria). Laryngoscopic examination revealed a slight swelling of the hinder laryngeal wall, and upon it a distinct grey zone one millimètre thick (probably of thickened epithelium). An elliptical chink remained between the vocal cords on phonation. In three cases (two after small-pox, one after diphtheria) there were suffocative fits, and the voice was almost extinct. On the hinder laryngeal wall a white or greyish-white zone was seen, consisting of numerous small excrescences. In one case these growths pressed between the vocal cords, and prevented the glottis from closing completely. The vocal cords themselves were normal. In all cases, the internal thyro-arytenoids were partially paralysed, probably from atrophy. The treatment indicated in the milder cases is astringent inhalations; in the severer forms, painting with iodo-glycerine, or cutaneous application of the induced current, or dilatation with Schroetter's bougies. With regard to the troubles which are apt to follow tracheotomy, and which tend to prevent the removal of the cannula, Dr. Michael enumerates the following: 1. Granulations springing either from the tracheal wound or from the hinder wall of the trachea; 2. Inflammatory hypertrophy about the vocal cords; 3. Paralysis of the posterior crico-arytenoids; 4. Spasms of the glottis; 5. Cicatricial stenosis of the larynx and trachea; 6. Softening and consequent yielding of the tracheal rings; or 7. The combination of two or more of these causes. To prevent ulceration of the hinder wall of the trachea, consequent upon pressure of the cannula, the alternate use of a long and a short cannula is recommended. [Ulceration of the tracheal wall may be very readily prevented by the use of Mr. Morrant Baker's flexible tracheotomy-tubes. The comfort to the patient, and the immunity from danger which the use of the soft tube ensures, does not seem to be appreciated by foreign writers as it ought. In the reporter's experience, it is the anterior and not the posterior wall that is apt to suffer from the pressure of the ordinary silver cannula.—*Rep.*]

15. *Langreuter on Syphilitic Stenosis of the Pharynx.*—Dr. Langreuter records a case of pharyngeal syphilitic stenosis (*Deutsches Archiv für Klin. Med.*, No. xxvi). The patient had suffered for seven years with syphilis. Tracheotomy had already been performed for stenosis of the larynx. A firm cicatricial tissue bridged over the naso-pharyngeal cavity above, and the pharyngo-laryngeal cavity below. This was of a greyish-red colour; some of the fibres were of a glistening white. The naso-pharyngeal cavity was closed, with the exception of a chink. Firm projecting bands proceeded from this small aperture, in an arch-like manner, to both sides of the roots of the tongue. The pharyngo-larynx was bridged over by a tightly stretched mass of cicatricial tissue, which drew the roots of the tongue towards the posterior wall of the pharynx. In the middle of this tissue there remained a round opening with sharp hard edges about the size of a pin's head, the only communication between the mouth and the respiratory and digestive tracts. The stricture was incised with a sheathed knife; the tissue was so hard that it creaked while being cut. The patient was at once relieved. Fresh ulcerations interrupted the treatment, and led to a relapse. After a course of inunction the stricture was incised again, and then dilated with Schroetter's bougies. The tracheal cannula was finally dispensed with. The patient breathes, eats, and drinks easily through the pharyngeal opening.

16. *Daly on Nasal Polypi.*—Dr. Daly, in a paper read before the American Laryngological Association (*Arch. of Laryngol.*, May 1881), furnishes the notes of some cases of nasal polypi, and gives a brief outline of treatment for their removal and the prevention of their return. He has noticed that the largest percentage of these growths belong to the myxomata; that the next in frequency are the fibromata; and that there is a tendency in polypi of the former type to change with age into the latter, beginning in the pedicle with a growth of fibrous tissue, and extending throughout the substance of the tumour. Two-thirds of the cases under his own observation were polypi of the middle turbinated bones. One of their chief characteristics is a tendency to recur, unless the mucous membrane be entirely destroyed or altered into a healthy tone. Recurrence does not seem to render them liable to assume a carcinomatous form. Dr. Daly recommends that, in removing polypi or reducing growths in the retro-nasal region by the loop, forceps, or galvano-cautery, the tip of the index finger should be held in the vault of the pharynx as a guide. In operating in the patient's right naso-pharynx, the index finger of the operator's right hand should be used as a guide; in the left naso-pharynx, the finger of the left hand, the patient being instructed to lean a little forward, and press against the operator's finger. By this means, his head is held firm, and sufficient force can be used to overcome the expulsive action of the levator palati muscles, which soon give way, and the tip of the finger is brought directly to the pharyngeal orifices of the posterior nares, while with the right hand the loop handle, the forceps, or the electrode, can be guided with certainty into any of the fossæ of the nasal cavity. This plan, the author thinks, gives many advantages in operating, as the index finger in the retronasal opening is a certain guide and director, as well as an efficient protection to the Eustachian orifices and septum nasi.

W. J. WALSHAM.

17. *Gerster on Wound of the Hard Palate by Fracture of the Lower Jaw: Uranoplasty.*—At a meeting of the New York Society of German Physicians (*New York Medical Record*), Dr. Gerster shewed a man, on whom he had successfully performed an uranoplastic operation. The case was that of a brewer, who had fractured his lower jaw nine years since. At the time of receiving that injury, a splinter of bone had forced its way through the hard palate. Necrosis followed, and finally a triangular opening remained. Speech was very much impaired, and during deglutition portions of food frequently entered the nasal cavities. A piece of soft palate had to be sacrificed in order to secure a linear union. The two edges of the wound were of unequal length, a circumstance which rendered the operation unusually difficult. A little gaping at one extremity at first took place, but cauterisation healed it, and the final result was good.

OTOLOGY.

RECENT PAPERS.

1. WOLF, O.—On the Function of the Chorda Tympani. (*Archives of Otol.*, Dec. 1880.)

2. MOOS, S., and STEINBRÜGGE, H.—A Peculiar Modification of the Osseous Tissue in the Pyramid of the Temporal Bone. (*Ibid.*)

3. WILHELMI, R. F.—Deaf-mute Statistics in the Province of Pomerania and the district of Erfurt. (*Ibid.*)

4. SPALDING, J. A.—Diplacusis Binauralis; Self-observation. (*Ibid.*)

5. BRUNNER, G.—An Interesting Case of Protracted Deafness caused by the Report of a Musket: with Remarks. (*Ibid.*)

6. ELY, E. T.—Skin-Grafting in Chronic Suppuration of the Middle Ear. (*Ibid.*)

7. KNAPP, H.—The Treatment of Eczema of the Ear by Nitrate of Silver. (*Ibid.*)

8. SEXTON, S.—On False-hearing and Autophony in Singers, Speakers, and Performers on certain Musical Instruments. (*New York Med. Rec.*, Jan. 22, 1881.)

9. URBANTSCHITSCH, V.—Observations on Central Affections of the Acoustic Nerve. (*Arch. für Ohrenh.*, Band xvi; and *Med.-Chir. Rund.*)

10. RAYNAUD, MAURICE.—On Diabetic Otitis. (*Annal. des Mal. de l'Oreille, du Larynx*, etc., May 1881.)

11. BARATOUX.—Rhodes's Audiphone at the National Institution for Deaf-Mutes at Paris. (*Ibid.*)

12. TREIBEL, E.—On the Use of the Dentaphone with Deaf-Mutes. (*Arch. of Otol.*, Dec. 1880.)

13. BARATOUX.—Contributions to the Study of the Alterations in the Ear in Deaf-Mutism. (*Annales des Malad. de l'Oreille, du Larynx*, etc., May and July 1881.)

14. MOSLER.—On the Treatment of Chronic Naso-Pharyngeal Catarrh by Washing out from the Naso-Pharyngeal Cavity. (*Deutsche Medic. Woch.*, Jan. 1, 1881. Abstracted in *Med.-Chir. Rund.*)

15. PAUL, C.—A New Sign of Scrofula Furnished by Ear-rings. (*L'Union Méd.*, 1881, Nos. 29, 32, 34, 39, 42, 45, 47, 50.)

16. LADREIT DE LACHARRIERE.—On Congestion and Ankylosis of the Joints of the Ossicles of Hearing. (*Annal. des Mal. de l'Oreille, du Larynx*, etc., July 1881.)

17. MOOS, S., and STEINBRÜGGE, H.—Nerve-Atrophy in the First Cochlear Convolution: its Physiological and Pathological Importance. (*Arch. of Otol.*, March 1881.)

18. MOOS, S.—A Rare Case of Stab-Wound of the Left Half of the Skull. (*Ibid.*)

19. STEINBRÜGGE, H.—A Case of Trepanation of the Mastoid Process: Death by Miliary Tuberculosis. (*Ibid.*)

20. ELY, E. T.—Pyæmia following a Mastoid Abscess: Treated without Medicine: Recovery. (*Ibid.*)

21. HEDINGER, A.—On a Peculiar Exostosis in the Ear. (*Ibid.*)

22. MOOS, S., and STEINBRÜGGE, H.—Anatomo-Pathological Conditions in a case of Malformation of the Right Ear. (*Ibid.*)

23. KNAPP, H.—The Cotton-Pellet as an Artificial Drum-head. (*Ibid.*)

24. MÉNIÈRE, E.—The Treatment of Chronic Purulent Otorrhœa. (Second International Otological Congress. Milan, Sep. 1880.)

25. WEIL.—Preliminary Communication on the Results of the Examination of the Hearing in 4,500 School Children.

26. BOUCHERON.—The Pathogenesis of Deaf-Mutism. (*Soc. de Méd. du VIe. Arrondis. de Paris*, May 30, 1881.)

27. BARR, THOMAS.—Importance of a Knowledge of Diseases of the Ear, etc. (*Glasgow Med. Jour.*, Jan. 1881.)

28. ADAMS, J. A.—On Certain Anatomical Relations between Abscess of the Brain and Aural Disease. (*Glasgow Med. Jour.*, vol. xv.)

29. GRUBER, JOSEF.—On Some of the More Recent Methods of Treating Otorrhœa. (*Allgem. Wiener Mediz. Zeitung*, 1880, Nos. 28, etc.; and *Monats. für Ohrenheil.*)

30. WEIL.—On Otorrhea and its Treatment. (*Memorabilien*, 1881; and *Med.-Chir.Rund.*)

31. POLLAK, JOSEF.—Large Gumma on the Mastoid Process and Temple, complicated with Purulent Inflammation of the Middle Ear. (*Allg. Wiener Med. Zeitung*, 1881, No. 20; and *Med.-Chir. Rund.*)

32. POLITZER, ADAM.—A Small Instrument for Deaf Persons. (*Wiener Med. Woch.*, 1881, No. 18.)

33. DOUMERGUE, A.—Contribution to the Study of the Auditory Troubles in Bright's Disease. (*Thèse de Paris*, 1881; and *Revue Mens. de Laryngol., d'Otol.*, etc.)

34. CHAMPEAUX.—Contribution to the Study of the Symptoms, Diagnosis, and Pathogeny of Ménière's Disease. (*Thèse de Paris*, 1881; and *Revue Mens. de Laryngologie*, etc.)

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1. *Wolf on the Function of the Chorda Tympani.* — Dr. Oscar Wolf made some observations (*Arch. of Otol.*, Dec. 1880) on a patient in whom the chorda tympani was divided during division of the posterior fold of the membrana tympani. There were complete loss of taste, and insensibility in regard to tactile and thermal excitation, over an area represented by a right-angled triangle, whose hypothenuse was formed by the edge of the tongue, and whose longest side (middle line of the tongue) was two centimètres in length. The paralysis of taste and sensibility consequently affected the tip of the tongue also.

3. *Wilhelmi on Deaf-Mute Statistics of the Province of Pomerania and the District of Erfurt.*— Dr. Hartmann (*Ibid.*) contributes an abstract of Wilhelmi's statistics containing many interesting facts. Wilhelmi's material is too scanty, he thinks, to allow us to formulate a rule regarding the influence of marriage of near kindred upon the occurrence of congenital deaf-mutism in the children. With regard to the propagation of deaf-mutism by marriage, Wilhelmi concludes as follows. 1. Deaf-mutes rarely transmit their deformity to their offspring. (Experience shows that later descendants are more endangered.) 2. The marriages of deaf-mutes in general are not very fruitful. Wilhelmi considers inebriety of the parents as a very important factor in the production of deaf-mutism in the children.

4. *Spalding on Diplacusis Binauralis.* — Dr. Spalding (*Ibid.*), who suffers from otitis media catarrhalis chronica, after exposure of his left ear to the loud noise of a machine in a shoe-manufactory, became affected with ringing in the ears and diplacusis, consisting in the four notes, G^2, G sharp^2, A^2, and A sharp^2, being heard normally in the right ear, whilst in the left ear they were heard a minor third above. A few hours afterwards, the following notes were found altered in a similar manner, viz., G sharp^2, A^2, A sharp^2, and B^2. The next morning the false tone had disappeared. The author suggests as cause of the phenomenon an increase in labyrinthine pressure, secondary to, and dependent upon, some sudden change in the middle ear.

6. *Ely on Skin-Grafting in Chronic Suppuration of the Middle Ear.*—Dr. Ely (*Ibid.*) has operated in nine cases, but with results which, judging from the brief report which he gives of three cases, are not very brilliant. Sloughing of the grafts followed within a few days in most instances, but the author thinks that in some cases the operation had some effect in stimulating cicatrisation, even though sloughing of the grafts appeared to occur.

7. *Knapp on the Treatment of Eczema of the Ear.*—Dr. Knapp (*Ibid.*) prefers the treatment of this affection with nitrate of silver to all other methods. His plan is as follows. After the eczematous surface has been thoroughly cleansed and the scabs and crusts removed as far as possible, it is dried and painted with a one to three per cent. solution of nitrate of silver; a moist sponge being at the time held on the skin immediately below the diseased parts, in order to prevent any of the solution from running down. The parts are then covered with lint or picked linen, which, if secretion be present, may be smeared with cold cream, or a one per cent. yellow mercurial ointment. This process is to be repeated by the surgeon every morning; whilst each evening the patient cleanses the ear and reapplies the ointment. The author has found this treatment sufficient to effect a cure from beginning to end, but in the later stage oleum rusci may be used with advantage.

8. *Sexton on False-Hearing and Autophony.*—According to the author, false-hearing depends upon the circumstance that, in certain diseased states of the ear, the conductive mechanism not only permits sounds within the body, which are usually inaudible, to be heard, but that it fails to transmit in the normal manner to the auditory nerve, sounds that reach it through the surrounding air. The author holds the opinion that undulations of sound in speaking, singing, etc., although always transmitted to the ears through the intervening tissues as well as the air, are in the normal state of the transmitting mechanism excluded; otherwise there would be confusion from interference; whilst in the former case the voice is perceived directly through the tissues of the head, and is false, as regards both pitch and timbre. The author briefly reports eleven cases of various ear-diseases, in which false hearing was present. A practical point which he emphasises is that vocalists, who suffer in this manner, frequently imagine that they have some throat-affection which modifies their voice, whereas, in reality, it is only the ears which are at fault, giving rise to the false hearing.

9. *Urbantschitsch on Central Affections of the Acoustic Nerve.*—Dr. V. Urbantschitsch (*Arch. für Ohrenh.*, Band xvi, 3; and *Med.-Chir. Rund.*) communicates four cases of the following character.—Case I was functional deafness in a case of hysteria, with transference of the aural symptoms under the influence of the magnet to the opposite side.—Case II was deafness for speech in a syphilitic patient, coming on after exposure to cold. The author assumes a syphilitic affection of the brain.—Case III was bilateral deafness (in consequence of a slight injury), which the author attributed to a small effusion of blood in the region of the fourth ventricle.—Case IV was sudden deafness after profuse epistaxis. In the absence at the necropsy of all lesions to account for the deafness, the author considered the case analogous to those in which great loss of blood produces sudden amaurosis of both eyes.

10. *Raynaud on Diabetic Otitis.*—M. Maurice Raynaud relates (*Annal. des Malad. de l'Oreille, du Larynx, etc.*, May 1881) a case of diabetes, accompanied by anasarca, occurring in a man aged 47. On. Jan. 27, twenty-three days before his death, the patient was seized, without evident cause, with violent pain in the right ear between six and seven o'clock in the evening. The pain increased rapidly till midnight, when free hæmorrhage occurred from the meatus, accompanied by a relief of the pain. The following day, a serous fluid, mixed with blood, was found dropping freely from the ear. It continued to do so for several days, the fluid becoming gradually more serous in character. Examination on Jan. 30 showed that it contained no blood, but a considerable number of leucocytes. A considerable quantity of albumen was found in the fluid, but not a trace of sugar. Examination of the ear showed the membrana tympani covered with a whitish exudation of pseudo-membranous aspect, and, from its upper part, the liquid was seen emerging through a small perforation. The discharge became gradually less, and at the end of ten days was merely a simple oozing, which, however, continued until the patient's death. *Post mortem* examination of the temporal bone, made by Dr. Ladreit de Lacharrière, showed a considerable sized perforation in the anterior segment. The tympanic mucous membrane was red, swollen, and bleeding, and the tympanum contained a red-coloured purulent fluid. The mastoid cells were filled with a reddish liquid containing pus-corpuscles, and their lining membrane was red and softened. The bone-substance was much injected, mottled in places, and presented all the signs of inflammation. The vestibule, cochlea, and semicircular canals presented no sign of alteration. The author considers that in this case the chief, and probably the primary, lesion was the inflammation of the mastoid cells and bone, and likens it to the inflammatory affections of bone in other parts, which occur in diabetic patients. There was no albuminuria in this case, and, after death, the kidneys were found perfectly healthy. The heart also was unaffected.

11. *Baratoux on Rhodes' Audiphone.*—Mr. Rhodes, it appears, tried his audiphone on March 9 last before a distinguished company of medical men and professors at the National Institution for Deaf-Mutes in Paris (*Annal. des Malad. de l'Oreille, du Larynx, etc.*, May 1881). In five deaf persons who could speak, Rhodes' audiphone produced no amelioration in the perception of the voice, and appeared to render musical sounds more confused. The conclusion was arrived at, that it could not be of any use in teaching deaf-mutes to speak.

12. *Treibel on the use of the Dentaphone with Deaf-Mutes.*—The author (*Arch. of Otol.*, Dec. 1880) obtained entirely negative results with this instrument. He concludes that, where deaf-mutes are concerned, the dentaphone, in its present condition at least, cannot be put to any practical use, not even as a means of advancing articulation.

14. *Mosler on the Treatment of Chronic Naso-Pharyngeal Catarrh.*—Professor Mosler (*Deutsche Med. Woch.*, Jan. 1, 1881; and *Medic.-Chir. Rund.*) recommends the use, morning and evening, of a gargle of a glass of cold water, containing one to three tablespoonfuls of a 20 to a 25 per cent. solution of sea-salt. Importance, according to the author, attaches to the application of the fluid to the naso-pharynx, which is to be accomplished as follows. A large mouthful of the gargle being taken, the head is inclined backwards in order to let the liquid run back into the pharynx. Movements of deglutition and spasmodic expirations are then undertaken, the result being that, when they are successful, part of the liquid runs out of the nose when the head is held forward; the remainder of the gargle is expelled through the mouth. Patients who are able to expel tobacco-smoke through the nose learn this method most easily. Afterwards, it is well to

clean the teeth carefully. [Knowing the ease with which gas enters the tympanic cavities during eructation, we should think it not unlikely that the liquid might be driven along the Eustachian tubes by this method.—*Rep.*]

15. *Paul on a New Sign of Scrofula furnished by Earrings.*—Professor Paul, in a series of articles (*L'Union Méd.*, 1881, Nos. 29, 32, 34, 39, 42, 45, 47, 50), first describes a case of eczema of the auricle following on piercin gthe lobule, as an instance of an insignificant operation awakening, as it were, a latent constitutional malady. The great bulk of this essay, however, concerns another interesting question, viz., the effect of constitutional maladies on the healing of operation-wounds, as instanced by the deformities of the lobule left after the piercing of the ears in scrofulous subjects. The author's attention was drawn to this subject as long as sixteen years ago. Short details of 120 cases are given, the great majority of which consist of vertical cicatrices in one or both lobules, often multiple in each ear, and sometimes replaced or accompanied by slits in the lobule. In five cases only was there a history of violence (dragging on the earring) as a cause of the deformity. The author draws the following conclusions. The ulcerative process following the piercing of the ears is not a passing accident, or one immediate on the operation, but it always has a slow, chronic course. In 51 cases in which the time occupied by the ulceration in reaching the free border of the lobule could be determined, it was found to vary from several months to twenty years; the average length of time being about four years and two months. The fact that in as many as 79 per cent. of the cases the cicatrices were multiple, argues, the author considers, for their constitutional origin. Of 116 cases in which the aural deformity was present, 96 presented either scrofulous cicatrices, or the history of other scrofulous affections. From this it results that the majority of patients who present cicatrices, the result of an ulcerative process prolonged for a greater or less time after the piercing of the lobules, give evident signs of scrofula; and it is probable that the proportion is even greater than appears from the above figures, scrofulous antecedents having doubtless escaped observation as the result of imperfect histories. The kind of metal of which the earring is composed has, according to the author, no sort of influence on the ulceration; but the weight of the earring enters, he considers, as an important factor, inasmuch as heavy earrings accelerate the ulcerative process. The author concludes generally that every woman in whom the cicatrices produced by piercing the ears do not form a simple orifice, but an orifice provided with a swelling, or are replaced by a section or a cicatrix, is a scrofulous subject. He finds this sign of scrofula of value in the selection of wet-nurses. The author finally advises against the practice of piercing the ears in subjects who are manifestly scrofulous, but makes an exception in favour of cases in which it is done as a derivative for scrofulous ophthalmia, in which circumstances the earrings may be regarded as setons inserted into the lobules of the ears for therapeutic purposes.

16. *Ladreit de Lacharrière on Congestion and Ankylosis of the Joints of the Ossicles of Hearing.*—According to the author (*Annales des Malad. de l'Oreille, du Larynx, etc.*, July 1881), apart from catarrh, which is a very common cause of this affection, the diatheses giving rise to this form of ear-disease are the arthritic (rheumatism and gout, also migraine), the herpetic, and the syphilitic. He has several times observed an affection of the ossicles coinciding with the disappearance of rheumatism of the shoulder and neck, and *vice versâ*. Syphilitic congestions occur only at a late stage of the disease, and have no distinctive mark. In addition to the treatment of the diathesis present in any given case, the author recommends the internal administration of iodide of potassium (half a gramme daily), the application of an ointment of the same to the mastoid processes, and the instillation of a solution of the same salt into the meatus at night-time; also inflation of the middle ear with air impregnated with iodine vapour.

17. *Moos and Steinbrügge on Nerve-Atrophy in the First Cochlear Convolution.*—In a case of carcinoma of the right anterior central convolution, not directly involving the labyrinth, Moos and Steinbrügge (*Archives of Otology*, March 1881) found quantitative atrophy of the nerve-fibres in the lamina spiralis ossea of the first cochlear convolution. Impairment of hearing for the higher tones, which was observed in this case, bears out Helmholtz's hypothesis, that the nerve-fibres in the neighbourhood of the fenestra rotunda seem to effect perception of high tones, while those situated higher up are intended for the perception of lower tones.

19. *Steinbrügge on Trepanation of the Mastoid Process.*—Dr. Steinbrügge relates (*Ibid.*) the case of a boy, aged 5, suffering from caries of the mastoid process. On account of cerebral symptoms, an already existing fistula in the mastoid bone was enlarged with the gouge, but no collection of pus or movable sequestrum was found. *Post mortem* examination showed tubercular basilar meningitis, also cheesy degeneration of the lymphatic glands, miliary tuberculosis of the lungs, etc. No direct transmission of the morbid process in the temporal bone to the brain could be discovered.

20. *Ely on Pyæmia following a Mastoid Abscess; Treatment without Medicine; Recovery.*—The author considers (*Ibid.*) that in this case careful attention to food, stimulants, and dressings, as well as a free action of the bowels, assisted materially in the favorable termination of the case.

21. *Hedinger on a Peculiar Exostosis in the Ear.*—In the author's case (*Ibid.*) there was a tumour of bony hardness growing from the upper and posterior wall of the meatus, which became visibly smaller under the daily introduction of laminaria tents. Portions removed with the chisel, and examined histologically, showed an inflammatory proliferation of the papillæ and of the connective tissue, with deposition of lime within it (osteoid metamorphosis). Under treatment, the surface of the tumour became smooth and pale. It still, however, filled half the lumen of the meatus; but, as all inflammatory symptoms had subsided, the author did not consider its removal indicated. In regard to the etiology of exostoses, the author excludes syphilis as a cause in forty cases that he has seen. He finds them frequently associated with some other disease of the ear, such as chronic tubal catarrh or suppuration.

23. *Knapp on the Cotton-pellet as an Artificial Drum-head.*—Dr. Knapp (*Ibid.*) reports four cases in which cotton-wool pellets were of advantage in improving the hearing, and in one of which they had been worn for twenty-nine years. He employs cotton-pellets moistened with glycerine and water (1 in 4), and considers that their therapeutic action in arresting profuse discharge on the one hand, and in preventing the mucous membrane of the drum-

cavity from drying up, on the other, is most valuable. In some cases, he considers they are quite indispensable, and may be worn for a lifetime with permanent ease and benefit; in other cases, they are needed only periodically, according as the copiousness of the discharge or the exsiccation of the mucous membrane requires their action in one or the other direction. They should not be worn when the discharge is abundant and offensive.

24. *Ménière on the Treatment of Chronic Purulent Otorrhœa.*—Dr. E. Ménière recommends (Memoir read at the *Internat. Otolog. Congress*, held at Milan in Sept. 1880) a solution of carbolic acid in Price's glycerine (1 in 10), of which two to four drops are to be instilled into the ear (after thorough cleansing) twice daily, or preferably to be applied on cotton-wool by means of a fine pair of forceps. Afterwards, stronger solutions may be used; those of 5 to 10 parts of carbolic acid to 10 parts of glycerine being applied by the surgeon. The author has treated more than 300 cases successfully by this method. It does not appear that this method acts at all rapidly; and the author mentions a case in which, after five months' treatment, there was no improvement, but, by the end of fourteen months, recovery had taken place. He recommends that when the affection is of old standing, the treatment, gradually diminishing the quantity and frequency of the applications, should be continued for two or three months after recovery.

25. *Weil on the Results of the Examination of the Hearing in* 4,500 *School Children.*—The following are some of the conclusions at which Dr. Weil of Stuttgart has arrived from the examination of the above large number of children. The normal ear hears whispered speech of medium intensity at a distance of 66 to 82 feet amongst sufficiently quiet surroundings. Impairment of hearing is of very common occurrence. In the national schools (*Volksschulen*) the hearing of as many as 30 per cent. of the children was defective. This percentage is less in children of the better classes; *e.g.*, in the *Catharinenstift* it was only about 10 per cent. The percentage increases with the age. Perforation of the membrana tympani, with suppuration, was found in 2 per cent. of the children; plugs of cerumen or commencement of the same, in 13 per cent. Most of the children had never been under treatment, and many had not the least idea of their affliction; not a few being considered inattentive, and probably treated accordingly. This corroborates the proposition previously enunciated by the author, viz., that every inattentive child should be examined as regards its hearing power. The author recommends that in schools, at the beginning of every term, the master should test his pupils' hearing, which can be done without much trouble and loss of time. By this plan alone is it possible to prevent children from being misjudged.

26. *Boucheron on the Pathogenesis of Deaf-mutism.*—M. Boucheron, at the Société Médicale of the sixth Arrondissement of Paris, May 30th, 1881, again brought forward his views in regard to naso-pharyngeal catarrh as a cause of deaf-mutism (see LONDON MEDICAL RECORD, March 15, 1881). It appears that ten deaf-mutes were actually under treatment, of which six had begun slightly to recover their hearing. In the discussion which followed, M. Machelard thought that the cerebral organization of deaf-mutes was defective.

27. *Barr on the importance of a Knowledge of Diseases of the Ear to the Student and General Practitioner.*—In an able lecture (*Glasgow Med. Jour.*, Jan. 1881) Dr. Barr brings forward, in a clear and concise manner, his views on the above subject. He urges the importance of attention to diseases of the ear for three chief reasons. 1. The great prevalence of diseases of the ear.—Their frequency, the author considers, is often underestimated, 'because probably there is no part of the body where disease so often exists uncared for by the patient and his ordinary medical attendant'. 'It is', according to the author, 'especially amongst the lower classes of the community, that considerable impairment of the function of hearing may exist without interfering in any marked degree with their work or with their intercourse one with another, and it is long before it is sufficiently serious in their estimation to require medical help. 2. The serious character of the accompaniments and consequences of ear-diseases.—Under this head the author alludes to the isolation of the deaf, and the annoyance caused to the deaf person's friends by his affliction, in addition to the well-known tinnitus, vertigo, and more serious accompaniments of ear-affections. 3. As a third incentive to the study of otology, the author brings forward the improved methods of examination and treatment in this department which we possess at the present day, and draws a graphic sketch of the state of matters in the past 'which unfortunately is not yet altogether in the past'. The general practitioner should, the author considers, 'be in a position to examine the interior of the ear, just as he auscultates the chest, feels the pulse, or examines the pupil'. 'Besides,' as the author adds, 'many valuable opportunities may present themselves in general practice for observing ear-diseases at an early stage, and checking their further progress.' [We recommend a perusal of this short lecture to those for whom it is intended.—*Rep.*]

28. *Adams on Abscess of the Brain and Aural Disease.*—In this paper (*Ibid.*, vol. xv) the author's argument is as follows. 1. Aural diseases are more frequent in the early than in the later stages of life, and suppurative discharges from the ear follow the same law; in support of which he adduces statistics from Kramer, Wilde, and Roosa. 2. Contrary to what might be expected, and to what is currently believed, abscess or suppuration in the brain, whether encysted or diffuse, is much more frequent in advanced life than at an early age. The author has constructed a table of 105 cases of abscess of the brain due to various causes from different observers, from which it appears that 5 per cent. of the cases occurred in childhood, and above 72 per cent. in adult life. In another table, consisting of 80 cases of abscess of the brain, either originating exclusively from, or directly associated with, disease of the ear, 11 per cent. only occurred in childhood, and 63 per cent. in adult life. 3. There are anatomical peculiarities of structure in the organ of hearing, differing in the infant and in the adult, and which explain the greater frequency of abscess of the brain in adult life as originating from disease of the ear. Under this head the author alludes to the different conditions of the mastoid process and cavities found at different periods of life. In regard to deficiency of the tegmen tympani, which Toynbee found in 5 per cent. of cases, he considers that the majority of the cases where this abnormality was present must have been pathological; for in over 100 crania which the author has carefully examined, in no one instance did there exist such a deficiency. In the child, the author remarks, the tendency of the suppurative

flow is nearly altogether outwards, because the purulent matter finds less hindrance and a readier vent to the external surface through the thin and imperfect suture that forms the junction of the squamous with the mastoid process of the temporal bone behind and close to the meatus. 4. Under certain conditions, there is an abnormal state of the cerebral circulation which admits of a direct vascular connection between the ear and the brain. In this connection, the author first shows how the lateral sinus may become inflamed, may receive septic matter carried from the tympanum and mastoid cells, and may become more or less occluded through various causes. Whatever the cause of the obstruction, however, the flow of blood being arrested just as it should pass out of the cranium, a reverse stream of venous blood must take place in the sinuses. But the sinuses being practically non-dilatable, every collateral channel is overtaxed to carry off the accumulating blood. The superior petrosal sinus on the affected side, which is fed by veins from the inferior surface of the middle cerebral lobe, and also by veins from the tympanum and internal ear, is the first to become overcharged. The cerebral and cerebellar veins, and the inferior petrosal and longitudinal sinuses, may also receive some of the reversed current. These veins, however, are dilatable and have exceedingly thin walls, which under distension are liable to become varicose. The effect of this distended varicose condition is a continued and localised pressure upon the delicate surface of the brain, with consequent œdema and impaired nutrition. The chain of diseased process is, therefore, the author considers, very connected, and quite sufficient to induce softening or other form of diseased action, such as suppuration; and this altogether irrespective of the liability to the deposit of septic matter, which, if present in the lateral sinus, has by the circuitous channel just described direct access to the surface of the brain. The author concludes by calling attention to the importance of an early and earnest attention to the diseased condition commonly called a 'running ear', and to the 'probable, nay, certain value which should be placed on the operation of trephining the mastoid bone in cases of retained pus'.

29. *Gruber on the Treatment of Otorrhœa.*—Professor Gruber (*Allgem. Wiener Med. Zeitung*, 1880, Nos. 28, 29, 30) discusses three methods now in vogue, viz.: 1. Schwartze's treatment with strong solutions of nitrate of silver; 2. The method of treatment with spiritus vini rectificatus simus; and 3. Bezold's powdered boracic acid treatment; all of which the author has used with great benefit. The first plan of treatment he finds best in cases of extensive perforation, in which the tympanic mucous membrane is largely exposed. To avoid cauterising the Eustachian tube and throat unnecessarily, he introduces the caustic solution by means of a syringe, whilst the patient's head is resting on the opposite side of his occiput. The nitrate of silver is then neutralised by the injection of a warm solution of common salt. The strength of the caustic solution employed is 15 to 40 grains to the ounce. The effect of this treatment is usually rapid; and if four or five cauterisations fail of their effect, the author discontinues them. He has compared the action of boracic acid and of borax. He finds the latter, in concentrated solution, more effectual in otorrhœa as a symptom of 'chronic middle-ear catarrh accompanied by destruction of the drum-head,' than the powdered boracic acid; in chronic suppurative inflammation of the middle ear, on the other hand, in which there is destruction of the membrane when the patient comes under treatment, the boracic acid often renders very good service, but it must be continued for several weeks after the discharge has ceased, or relapse may occur. In cases of this description in which there are no polypoid growths, the author almost always employs first the boracic acid treatment, and only in the event of this failing does he have recourse to other methods.

30. *Weil on Otorrhœa and its Treatment.*—Dr. Weil (*Memor.*, 1881) is strongly in favour of Bezold's boracic acid treatment in chronic suppuration in the tympanic cavity. For eczema he recommends the following ointment: salicylic acid, half a gramme; dissolve in a little spirit, and add vaseline, 15 grammes.

32. *Politzer on a small Hearing Instrument.*—Professor Adam Politzer describes (*Wiener Med. Woch.*, No. 18, 1881) a small hearing-tube as of benefit in some cases of deafness. In principle it is based on the fact, first shown by the author, that the reflection of sound from the concha is intensified by the hollow formed by the posterior surface of the tragus. The little instrument is made of vulcanite, and has the shape of a horn, the smaller end being inserted into the meatus, and the larger aperture being directed backwards and fitting into the concha. The instrument is most effectual when the sound-waves have their origin directly opposite the patient's face. In 115 cases in which it was tried, it was found that the perception of the metronome rarely increased in proportion to that of the voice; in fact, it was often sensibly diminished. In regard to the voice, as a rule, the greater the degree of deafness the less the effect of the instrument. Of the above 115 cases, in 32 it produced no effect on the hearing distance, and in 12 it diminished the hearing power. The greatest improvement was found in three cases, in which the hearing distance was improved from 1½ and 2 mètres to 5 mètres. Three cases are mentioned in which it was of service for hearing in the theatre or opera-house.

33. *Doumergue on Auditory Affections in Bright's Disease.*—Dr. A. Doumergue (*Thèse de Paris*, 1881; and *Revue Mens. de Laryng., etc.*) has examined twenty-seven patients suffering from Bright's disease; thirteen had no ear-affection, whilst fourteen presented various functional troubles (hardness of hearing and tinnitus). The author is of opinion that these troubles are due either to catarrh of the tympanum, or to hæmorrhage into that cavity; but if during life there be no objective aural symptoms, he admits the possibility of œdema of the acoustic nerve. Necropsies will, however, be necessary to ascertain the lesion in these cases.

E. Cresswell Baber, M.B.

REVIEWS.

Manual of the Physical Diagnosis of Diseases of the Heart, including the Use of the Sphygmograph and Cardiograph. By A. E. Sansom, M.D. Third edition. London: J. and A. Churchill. 1881.

We are glad to welcome a third edition of this useful little manual. Clear, precise, and well arranged, especially in the first part of the work, it serves as an excellent introduction to the study of cardiac diseases. Here and there the author adopts,

perhaps, rather too dogmatic a tone on subjects which may well admit of difference of opinion; but positiveness of statement has its advantages in a manual for students, and is to be preferred to the over-refinement and hesitancy of some other writers. On the questions, however, of the diagnostic value of the sphygmograph and cardiograph, we find Dr. Sansom speaking with a positiveness which the highest authorities on the use and applications of these instruments would, we feel sure, be unable to sanction. Nor do his conclusions, as he states them, seem justified by his premises. The work, however, is pleasantly written, and contains a vast amount of useful information in a convenient form.

Lehrbuch der Physikalischen Heilmethoden für Aerzte und Studirende. Von Dr. M. J. ROSSBACH, Professor der Medicin und Vorstand des Pharmakologischen Instituts an der Universität Würzburg. Erste Hälfte. Berlin: August Hirschwald. 1881.

Text-Book of Physical Therapeutics for Practitioners and Students. By Dr. M. J. ROSSBACH, Professor of Medicine and Director of the Pharmacological Institute in the University of Würzburg. Part I. Berlin: August Hirschwald. 1881.

THIS work is one of a most useful character. Its aim is to bring before practitioners in a compact form the physiological action, therapeutic uses, and mode of application to the cure of disease, of those remedies which nature places ready to our hand. Such a work, to be of value, demands in the author experience and mental habits of peculiar kind, requires him to be receptive yet cautious, able to extract from vague and, frequently, biassed results the scientific truth contained. These qualities Dr. Rossback unites with a power of clear and lively exposition, which makes this first instalment of his work eminently readable.

He discusses the subject, so far as he has advanced, under three headings :—Air, Climate, and Cold and Warmth. Under the first heading, Dr. Rossbach enters fully into the therapeutic uses of compressed and of rarefied air, giving a description of the instruments used, both the portable pneumatic apparatus and the pneumatic chamber, and laying down the rules and cautions to be observed in those diseases to which the treatment is applicable. 'What mankind can have easily and cheaply, that it neither heeds nor values.' So says Dr. Rossbach. Were it not so, these expensive and not unfrequently dangerous apparatus may in many instances, such as small chest with general debility, predisposition to consumption, bronchial catarrh, etc., be most efficiently replaced by a system of respiratory gymnastics, like that described in detail by Dr. Rossbach. The more simple and natural exercises would be such as reading aloud, singing, and walking, more especially on gentle ascents, so as to induce deep and slow rather than rapid superficial breathing. In addition to these, a most efficient method of strengthening the respiratory function is the use of actual voluntary efforts in respiration, strong deep inspirations and prolonged expirations being made according to the strength of the patient; for example, for the space of fifteen minutes every two hours.

Under the head of Climate, Dr. Rossbach discusses the effects of atmospheric temperature, pressure, and moisture, as also wind, atmospheric purity, and soil. On page 71 he give an amusing account of the German terror of fresh air, a terror not altogether unknown even in England. His remarks as to the choice of a health-resort, and on what he rightly considers of more importance—the proper mode of living thereat—are probably as valuable as any part of the work. As he has already discussed Cold and Warmth from one point of view under Climate, his remarks on this head mainly resolve themselves into an exposition of the principles of hydrotherapeutics.

Altogether, we cannot too warmly commend this work to physicians generally; not merely to those whose patients can afford expensive remedies, but also to those who have to do with a middle-class, more or less limited as to purse and time.

JAMES ANDERSON, M.D.

The Influence of Barometric Changes upon the Body in Health and Disease. By ANDREW H. SMITH, M.D. New York.

THIS is a reprint from the *Archives of Medicine*, and begins by noticing the effects of a pressure of two or three atmospheres upon the human body. Pain of the extremities, vomiting, more or less complete paralysis, with headache, vertigo, and coma, are stated to occasionally occur. Sometimes these symptoms supervene after a short exposure, but in many persons no evil effects follow exposure to these abnormal pressures. Dr. Smith says that, 'hence we deduce the law, that under high atmospheric pressure, the centres will be congested at the expense of the periphery'; and also points out that the removal of the pressure, and not the pressure itself, is the immediate cause of the seizure.

Dr. Smith also enumerates several other 'laws', but he fails to see that the symptoms described are not produced by atmospheric pressure, but by a mechanical force such as cannot, under any ordinary circumstances, be exerted on the body. He then argues that it is evident that similar changes in the circulation must take place to some extent wherever there is a rise in the barometer, and conversely, that a fall of mercury must result in changes similar in kind, however slight in degree, to those attending a change from the caisson into the open air. He also believes that the pains in the bones, so often felt by some persons previously to a storm, are caused by diminished atmospheric pressure, whilst the feeling of good health, which is so noticeable during bright weather, is caused probably by increased atmospheric pressure. Also that the feelings of malaise in damp weather chiefly depend on reduced pressure.

Dr. Smith does not give any statistics to show that his theories are based upon facts, but suggests that results of great scientific value may be obtained by comparing notes of cases with barometric tables. Investigations of this kind have been made, but the difficulty of eliminating the effects of heat, moisture, and velocity of wind has prevented any decided results being obtained. Dr. Smith seems to place too little value on varying hygrometric states of the atmosphere, which play so important a part in checking or increasing the transmission of watery particles from the lungs and external surface of animals to the surrounding air.

J. W. TRIPE, M.D.

NEW INVENTIONS.

DILATOR OF THE CERVIX UTERI.

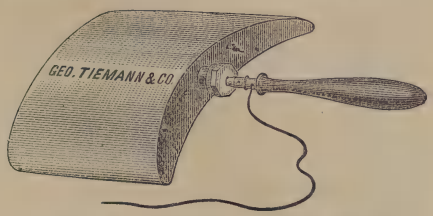
The annexed sketch represents a new form of instrument for gradually dilating the uterine neck. It was planned by Dr. James, of the Chelsea Hospital for Women, and made under his instruction by

Messrs. Maw, Son, and Thompson. The main feature of the contrivance consists in the employment of a flexible tube which glides along the stem of the sound into the uterus, the handle of the sound having been taken off, and then, after the tube has been placed on the stem, re-applied. The smallest tube has the diameter of No. 5 catheter, the next tube that of No. 6, and so on in succession up to No. 12; altogether there are eight tubes. It is stated that very

satisfactory results have already been obtained from the use of this instrument in certain cases of cervical stenosis.

INSTRUMENTS FOR ELECTRO-MASSAGE.

Mrs. Sarah E. Post, a trained nurse of Bellevue Hospital, New York, brings under the notice of the medical profession certain appliances which



have been found useful in general faradisation. The first is a curved-plate electrode, constructed upon a chord of four and three-quarter inches, with arcs of 50 deg. and 114 deg., and a width of three and a half inches. It has been applied by its convex surface

to the hollow of the foot, the suboccipital and lumbar regions, aud the concavities of great joints; by its convex surface to the hypogastrium, over the thigh, etc. In one end is a removable screw for filling the can with warm water, by which means any desired temperature may be given to it; also a weight of about six ounces, which enables it to apply itself closely to a part and to maintain its own position. It was designed as an improvement upon the plane plate and the flat sponge, compared with which it is stable in position, of an agreeable temperature, adapted to the curves of the body, and does not require moisture other than that furnished by the skin.

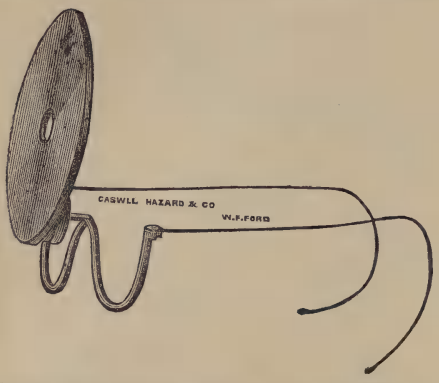
With this article applied to the surface of the patient and a plane plate at the feet of the operator, there is possible a comfortable and effective electro-

massage as practised by Mrs. Post during the past two years, the current being distributed through the hands of the attendant, the movements being those of a true massage.

The second is an application of the roller lately introduced in connection with certain induction machines. The instruments are made by Messrs. G. Tiemann and Co. of New York.

AN AURAL AND LARYNGEAL HEAD MIRROR.

This is a convenient and portable instrument that may be safely carried in the pocket in a case, or introduced into the aural and laryngeal pocket-case. The mirror is attached to a spectacle-frame, which increases its weight but little; and, when worn upon



the head, it is certainly much cooler than any arrangement with an elastic band. It has another advantage, that it does not disarrange the hair. This device has been perfected by Mr. Ford, of Messrs. Caswell, Hazard and Co. of New York.

MISCELLANY.

KÖNIGSTEIN ON THE EYES OF NEW-BORN CHILDREN.—Through the kindness of Prof. Späth, the author was enabled to examine the eyes of the children of the second lying-in clinic, and reports (*Med. Jahr. der K. K. Gessel. der Aerzte zu Wien*, 1881) the following conclusions.—1. The eye of the child is probably exclusively hypermetropic. 2. The colour of the child's iris is not invariably, but frequently, blue. 3. The difference in breadth and appearance between the retinal arteries and veins is not so great as in adults. 4. In a great many cases remains of the pupillary membrane are to be found, and in 10 per cent. there are extravasations of blood in the retina.

THE LATE M. NACHET.—At the last meeting of the Royal Microscopical Society the death was announced of M. Camille Sébastien Nachet, the founder of the well-known firm of opticians, Nachet et Fils of Paris. Early in life M. Nachet formed a friendship with Chevalier, the eminent optician of Paris; he took great interest in the construction of optical instruments, particularly microscopes, on which Chevalier was specially engaged. At that date the improved manufacture of various kinds of flint glass by Guinaud (the predecessor of Pfeil) of Paris, gave a great impetus to the improvement of microscopes on the Continent, while engaging the attention of Brewster, Herschel, Goring, Dollond, Britchard, etc., in England. In 1834 M. Nachet undertook the direction of the microscope department in Chevalier's house, and during six years his skill and ingenuity largely contributed to the reputation of the house. In 1840 he commenced business on his own account, devoting himself particularly to the microscope and the specialities required in ophthalmic surgery. In 1842 he contributed a paper to the *Académie des Sciences*, tome xiv, describing the construction of achromatic lenses, in which curves of half a millimètre in radius were utilised. From that date he received encouragement from some of the leading scientific men of Europe, such as Amici, Arago, Milne-Edwards, and, later on, of Drs. Lebert, Robin, etc., for whom he executed numberless experimental devices. In 1843 he exhibited at the Académie des Sciences his *camera lucida*, which is still regarded as one of the best forms of that instrument. In 1844-5-6, his name figures in the *Comptes rendus* with numerous improvements in the microscope. In 1847 he brought out his prism for oblique illumination, using the mirror in the axis—the forerunner of a large number of devices in which the total internal reflection of glass surfaces has been utilised. His son then joined him in partnership, and the firm brought out in rapid succession binocular microscopes, dissecting microscopes, etc., which occupy a prominent place in the popular text-books. M. Nachet's liberality in carrying out the construction of experimental apparatus rendered his house a favourite resort of amateurs of the microscope. For some years past he had ceased to take active part in the business. His death took place in Paris on the 28th Oct., in his 83rd year.

EXTREMES OF TEMPERATURE IN 1881.—In Mr. Symons' monthly *Meteorological Magazine* for February and August, 1881, are given accounts of the very low temperature recorded in the month of January, and the very high temperatures in England and in many parts of Europe in July. It is somewhat singular that one of the most intense frosts and the hottest day recorded during this century should have occurred in one year. From the 7th to the 26th of January the cold was intense over the greater part of Scotland, the north-west of England, and the central part of Ireland. On the 13th, the lowest reading for the day was registered at Cardigan, viz., 2 deg. Fahr, or 34 degrees below freezing point. On the 14th, readings below zero occurred in several parts of the country, the lowest being: −4 deg. at Corwen; −3 deg. at Cardigan; and −1 deg. at several places in Scotland. On the 16th, the lowest readings were: −12 deg. at Blackadder; −10 deg. at Stobo; −8 deg. at Kelso and Corwen; and −7 deg. at Scaleby and Alston. On the 17th, the lowest readings were: −22 deg. at Blackadder; −16 deg. at Kelso; −15 deg. at Stobo; −11 deg. at Lauder; and −10 deg. at Melrose. On this day, readings below 10 deg. prevailed over nearly the whole of Scotland, and the north, east, and west of England. At Greenwich, the lowest reading was 12.7 deg. Fahr. The contrast to these readings on July 15th was very marked, as at Alton, in Hants, 101 deg. was registered; 100 deg. at Aldesbury, Salisbury; 97.1 deg. at the Royal Observatory, Greenwich; 96.7 deg. at Foxgrove, Beckenham; and between 94 deg. and 95 deg. in various suburbs of London. Along the coast, as might have been expected, the temperatures were not so high, but even near Lowestoft, 88.5 deg. was registered. At Ramsgate it was 83.3 deg.; at Guernsey, 80.5 deg.; at Scarborough, 80.3 deg.; at Devon, 80 deg. Similar high temperatures prevailed in July nearly all over Europe: 94.8 deg. having been observed at Rome; 102.6 deg. at Madrid; 101.1 deg. to 99 deg. at Paris; 102.4 deg. at Bordeaux; 96.6 deg. at Geneva; 92.3 deg. at Vienna; 94.5 deg. at Berlin; and 95.4 deg. at Brussels. The effect of these temperatures on the public health was very great. In London, during the week ending January 8th, when the mean temperature was + 0.7 above the average, there were only 1,510 deaths registered against 2,016 and 2,114 in the two weeks of excessive cold, viz., from January 15th to the 29th. In the week ending June 25th, before the very hot weather began, there were only 1,399 deaths registered, against 1,816, 1,943, and 2,000 deaths, during the three hottest weeks in July. Extreme heat and cold appear to be nearly equally injurious to the inhabitants of England, probably partly because of the conditions under which we live, and also because our habits are not suitable for preventing the injurious effects of extreme vicissitudes of weather.

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